VOL. XLIV. No.7 JULY 1959

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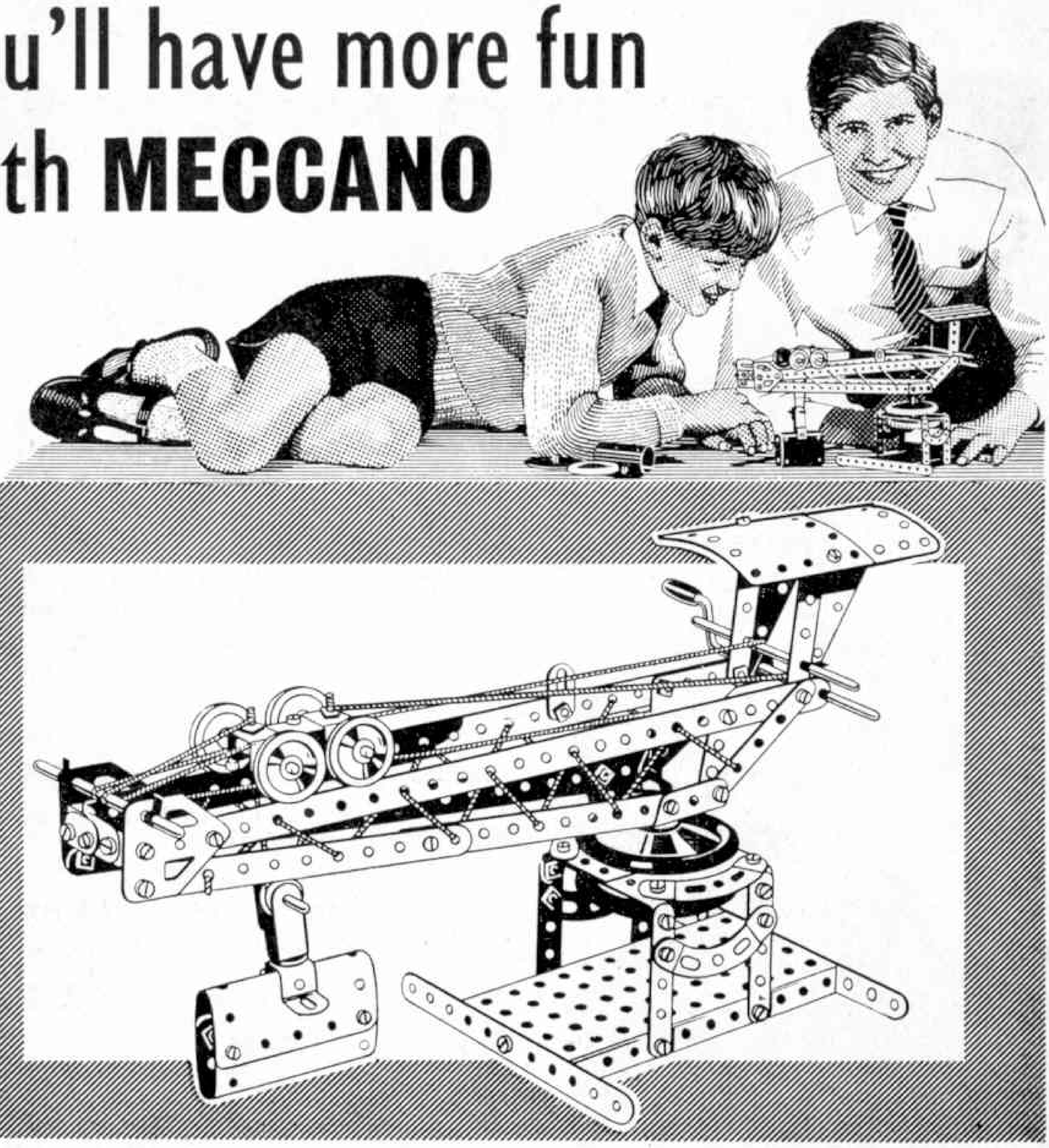

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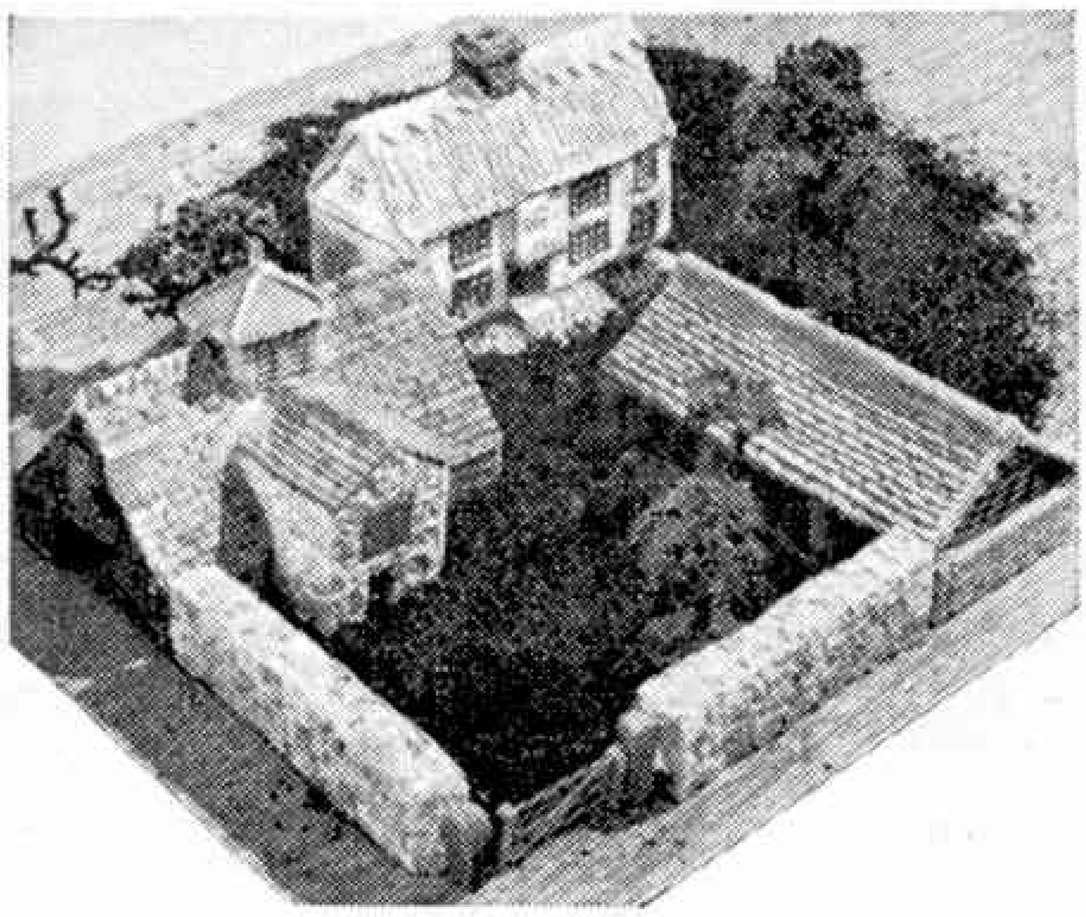

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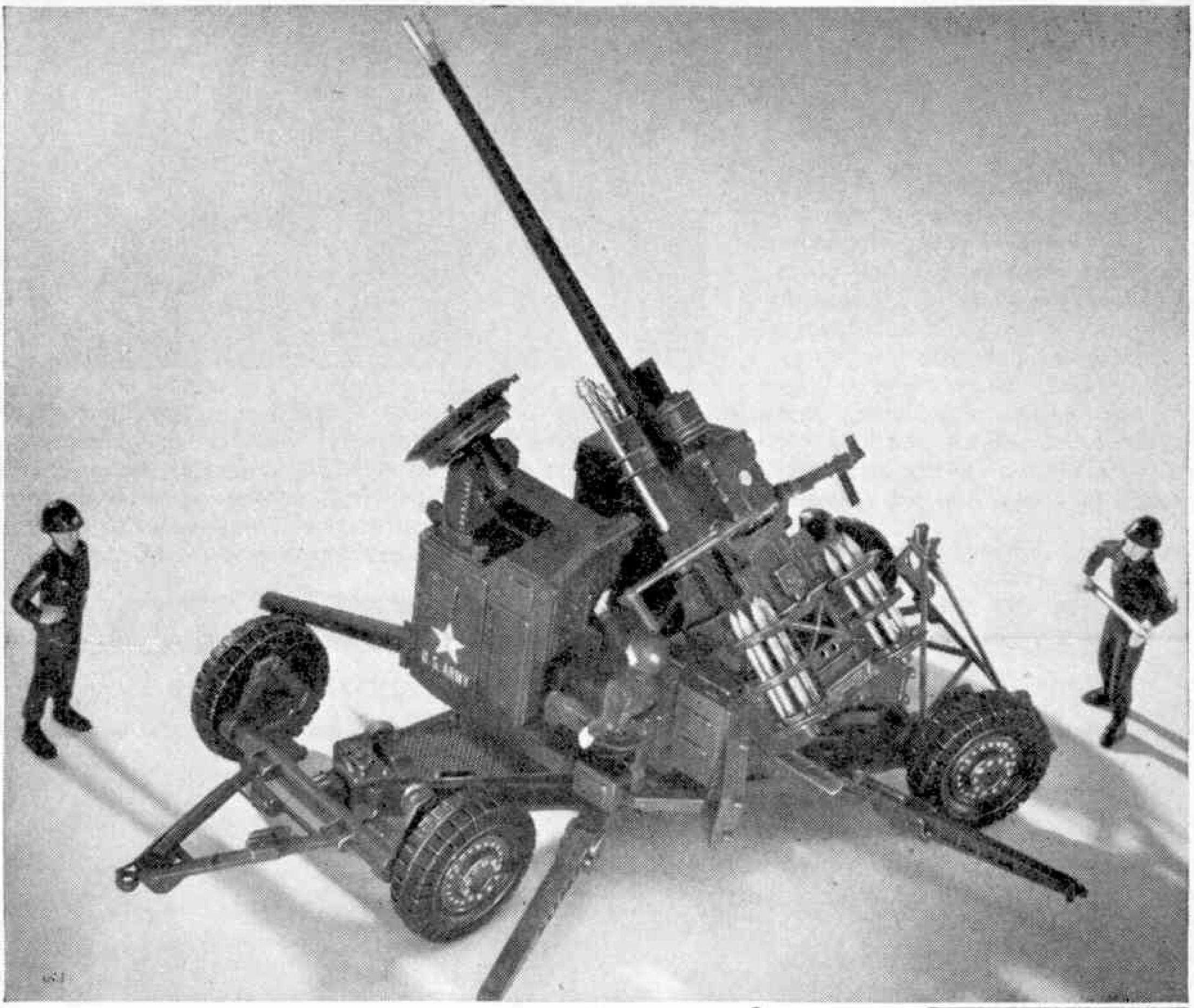

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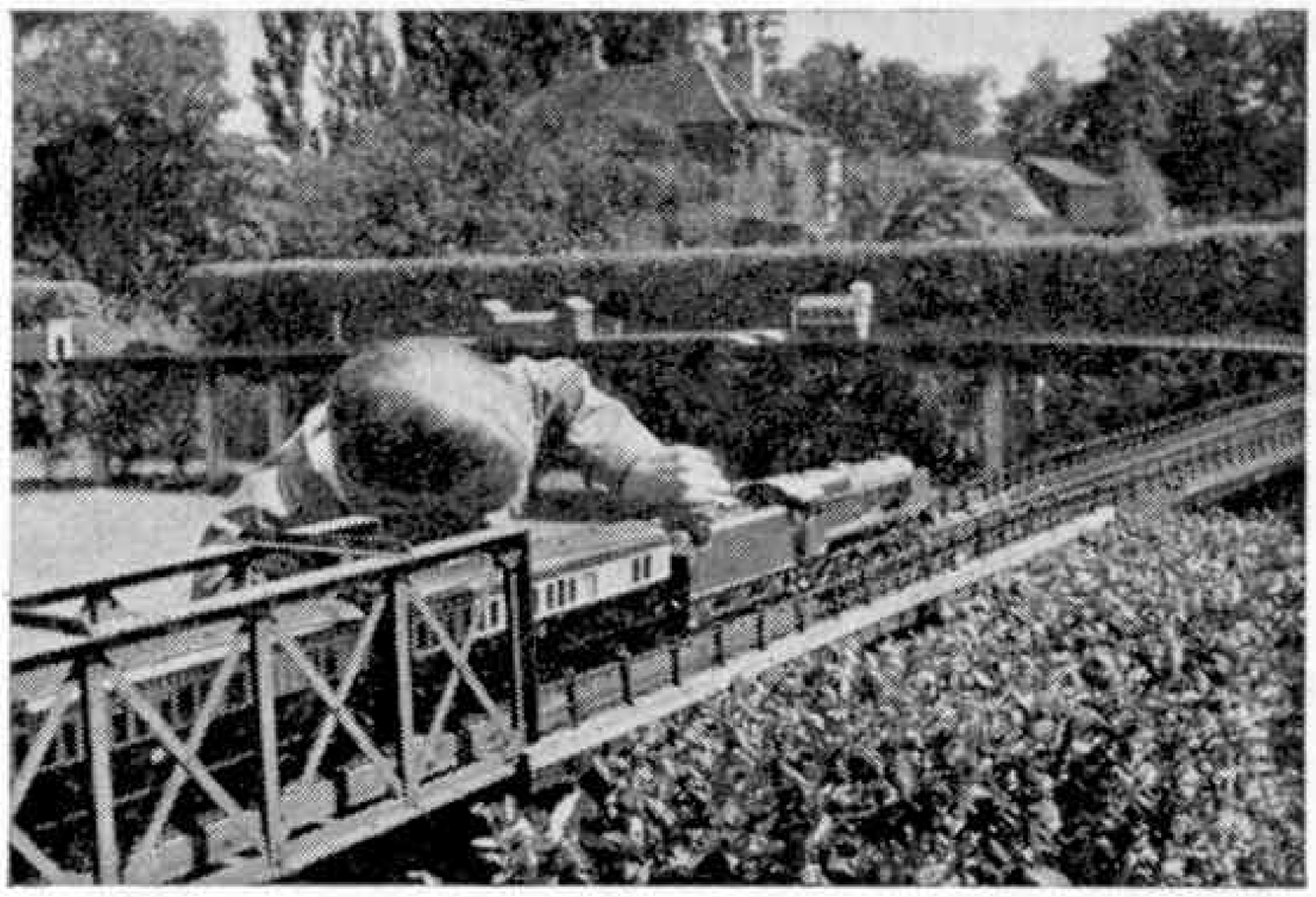

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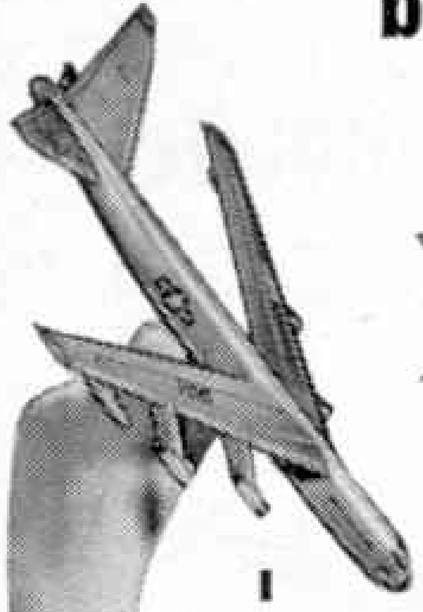

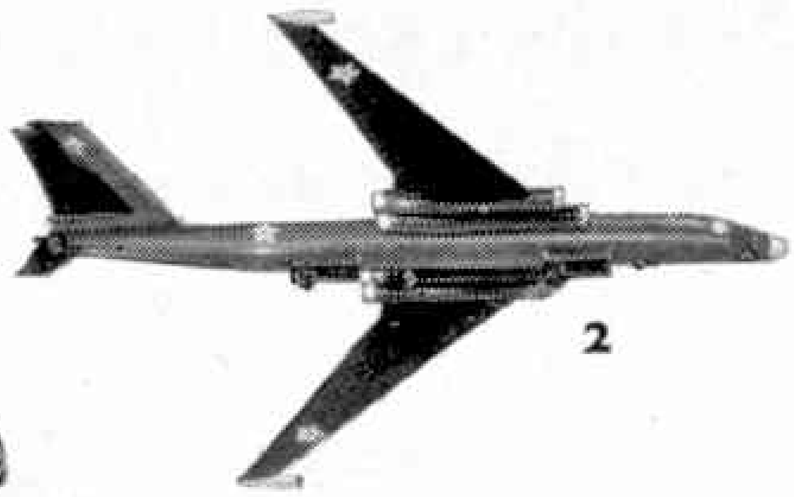

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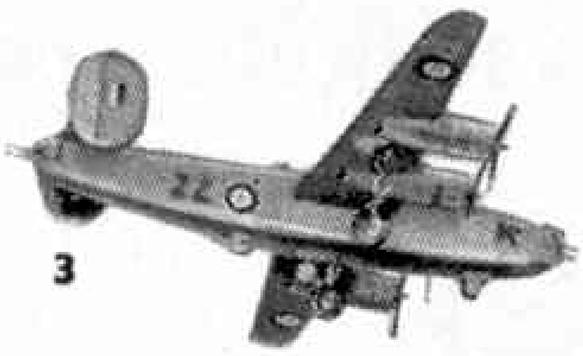

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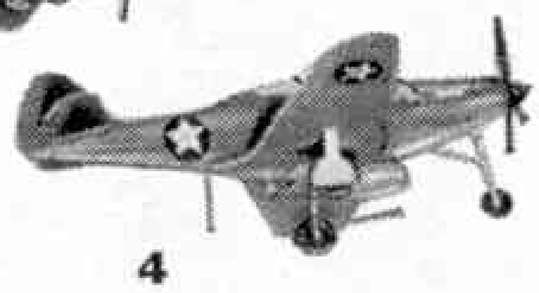

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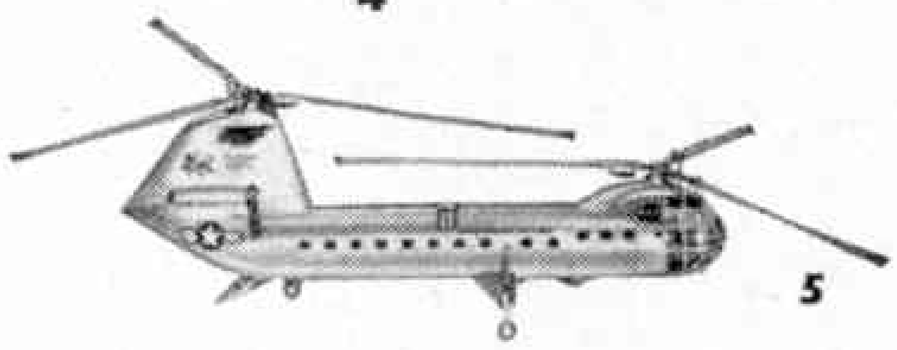

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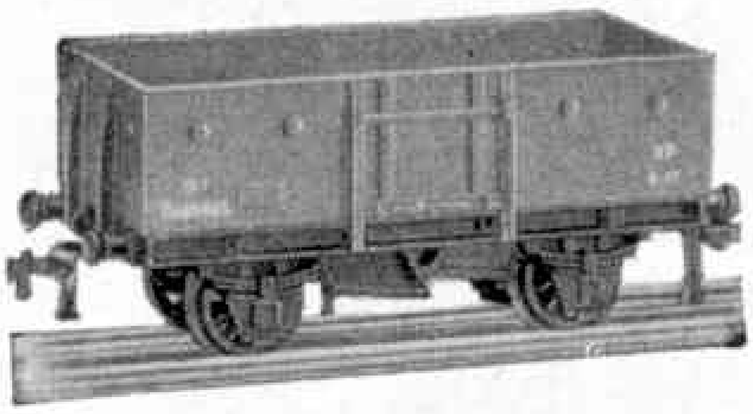
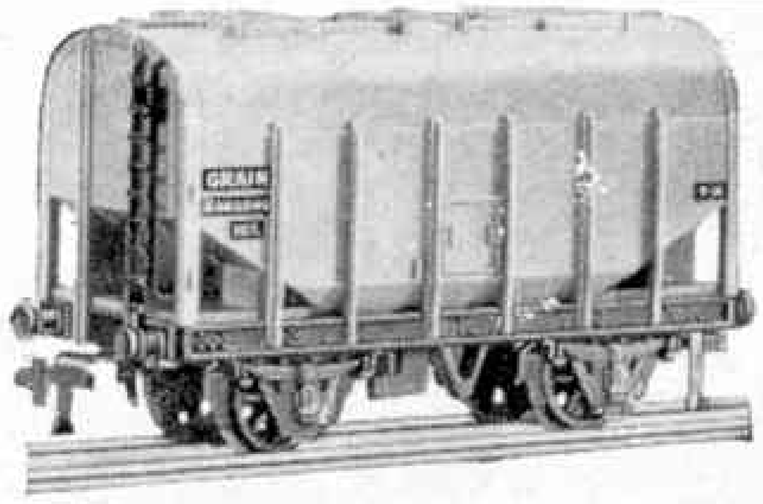


4640 Goods Wagon, Steel Type (SD6)
Length 3½ in.
4/4



4625 20-ton Bulk Grain Wagon (SD6)
Length 3¾ in.
6/8

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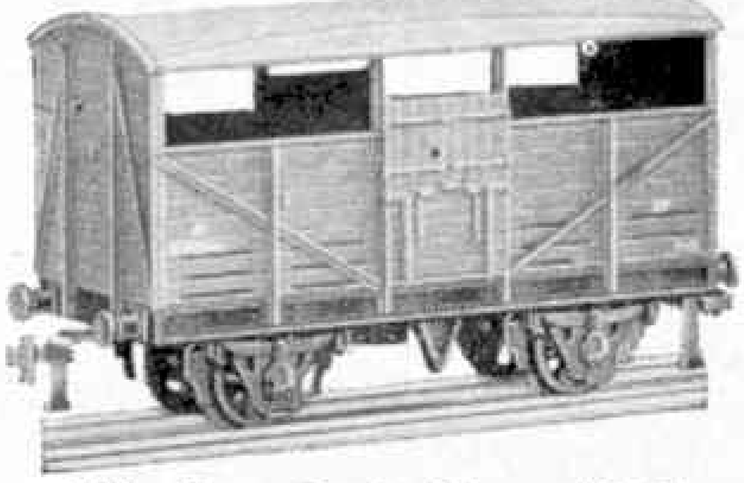
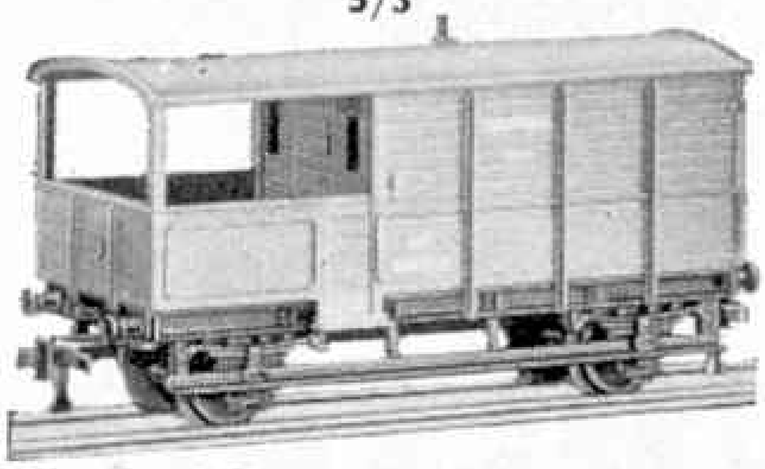
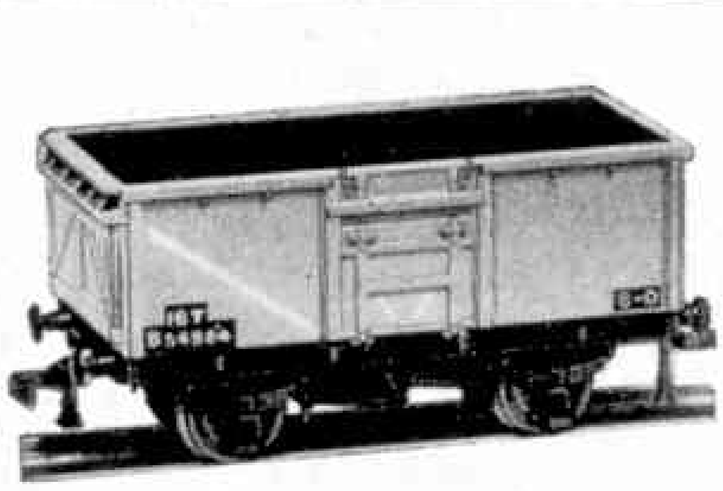


4630 8-ton Cattle Wagon (SD6)
Length 3¾ in.
5/3

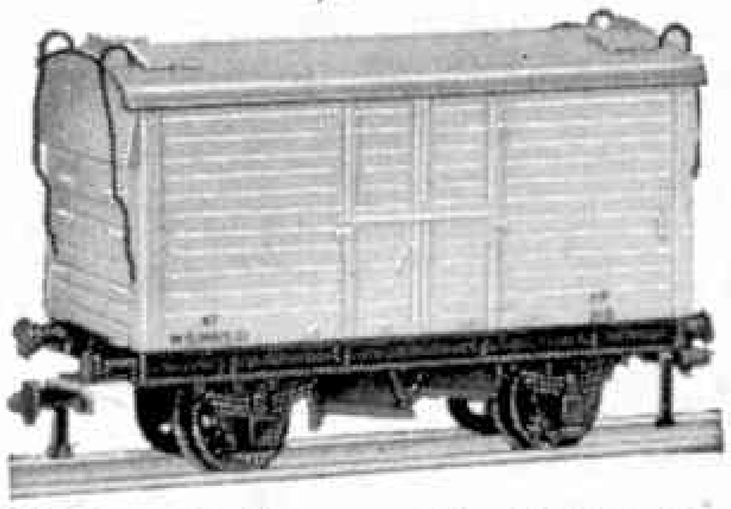


4312 Goods Brake Van (W.R.) (SD6)
Length 4 3/16 in.
5/11

4665 "Saxa" Salt Wagon (SD6)
Length 3½ in.
5/6



4655 16-ton Mineral Wagon (SD6)
Length 3½ in.
5/3



4320 6-ton Refrigerator Van (W.R.) (SD6)
Length 3½ in.
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Editorial Office:
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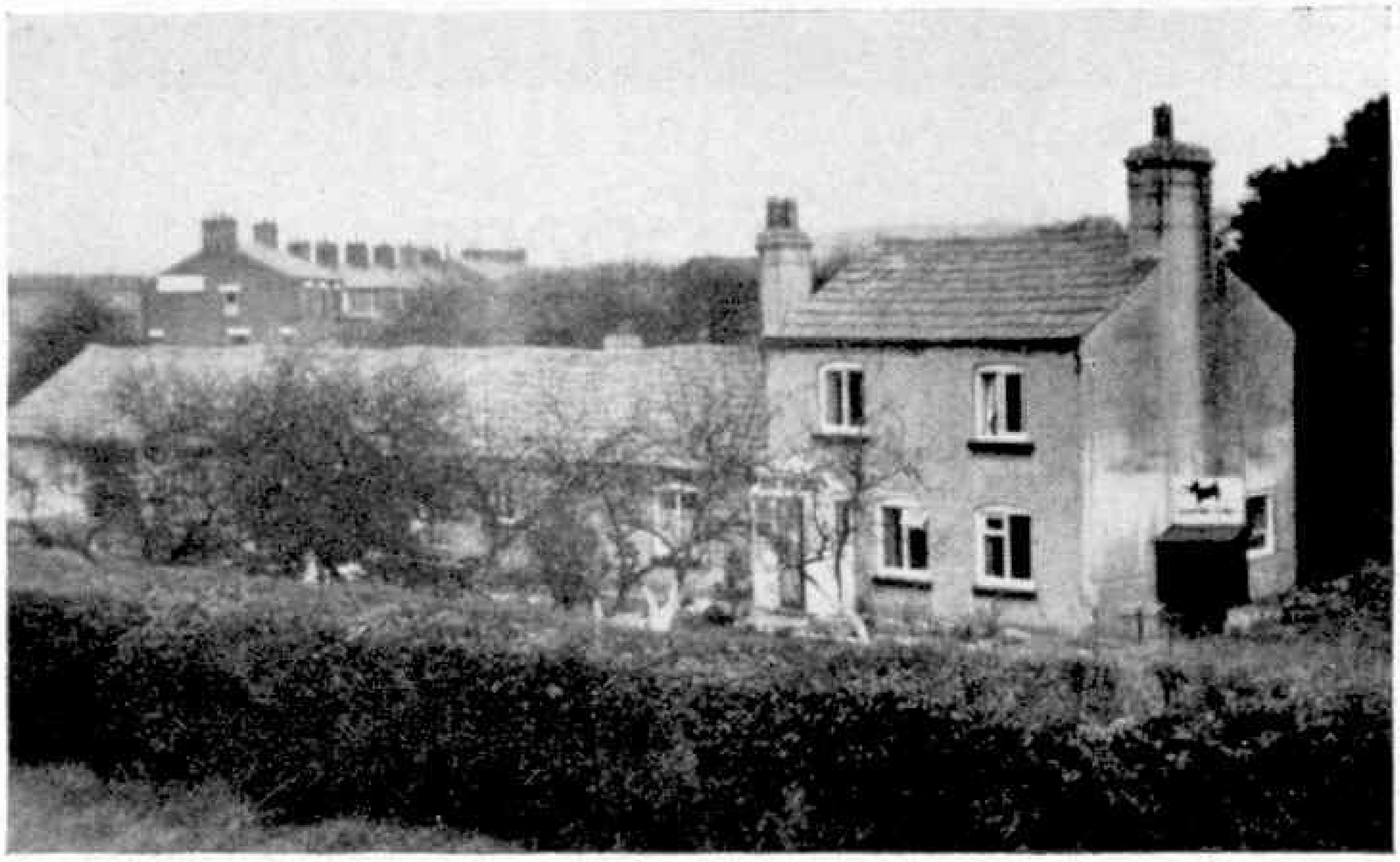
EDITOR : FRANK RILEY, B.Sc.

Vol. XLIV
No. 7
July 1959

A Link with George Stephenson?

THIS month I have a point of interest in the life of that great pioneer of railways, George Stephenson. One of his outstanding works was the construction of the Liverpool and Manchester Railway, the story of which, and of the victory of the *Rocket* in the famous locomotive contest of 1829, has often been told. In Smiles' *Life of Stephenson*, he tells us that at this period the great engineer used to ride out to Sankey, where he was building the viaduct of that name, and there put up at a little inn. Recently, however, Cyril R. Rowson, a reader of the *M.M.*, visited Collins Green, to see and admire Sankey Viaduct, and was asked by a local man if he had seen Stephenson's cottage nearby. This cottage is shown in my picture, and it was described as the place where Stephenson lived while building the Viaduct.

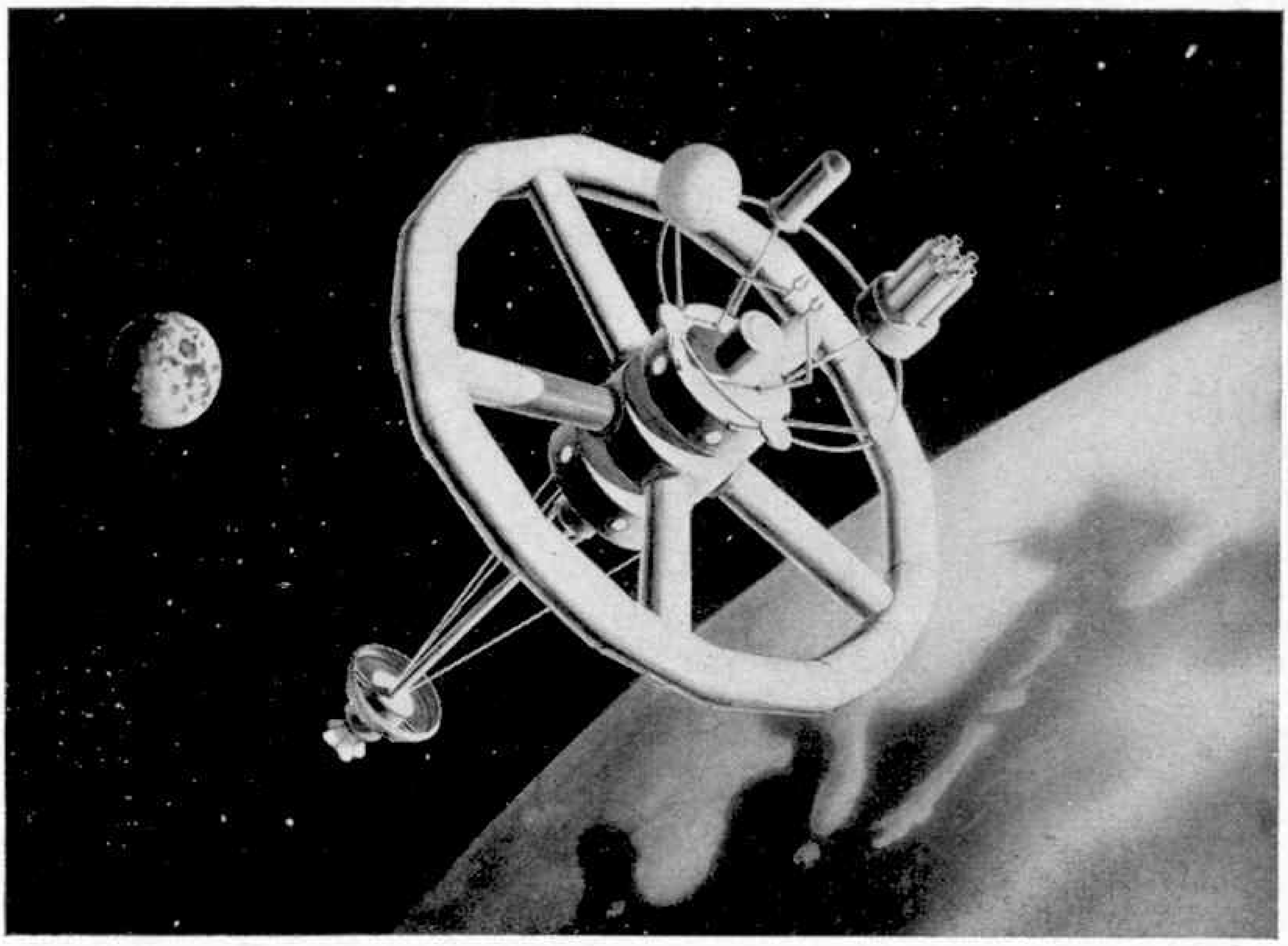
My reader was so interested that he went again to see the cottage and on this occasion he chatted with its present owner, who said that it was known as Dingle Cottage when Stephenson stayed there. He had been told by a very old resident in the neighbourhood of Stephenson's association with the house, which his informant in turn had learned from his father. So here is what seems to be an interesting story about a great engineer, and perhaps some reader can add to it? If so I should be delighted to hear from him.



This building at Collins Green, near Earlestown, is described locally as George Stephenson's cottage. He is said to have stayed there while building Sankey Viaduct on the Liverpool and Manchester Railway.

You will notice a long low building on the left of the cottage. This was said originally to be the workshop for craftsmen engaged in the construction of the railway. The quarry from which the stone of the viaduct came is just east of the cottage.

The Editor



Laboratory in Space

By John W. R. Taylor

AS you have probably read in the newspapers, the McDonnell company in America is building a space capsule in which a man will be launched into a satellite orbit around the Earth within the next few years. What is more, the seven military pilots from whom the occupant of this "Project Mercury" capsule will be chosen have already been named.

This is all very exciting, but the Lockheed company believe that far greater progress could be made if only the U.S. Government would provide sufficient money. As a start, they claim that they could put a 10-man team of scientists into orbit 500 miles above the Earth in a space-station with fully-equipped laboratories by 1969 if given the go-ahead now.

The picture on this page gives an idea of what their space-station would look like, and it must be pointed out right away that it represents no airy-fairy dream. It could be built without requiring any greater knowledge of flight in space than we shall gain from projects already under way, or more powerful rockets than we have under development right now. For that reason it is well worth studying in detail.

Basically the Lockheed space-station would be a wheel-shaped structure, 94 ft. in diameter and weighing some 400 tons. It would be made up of a number of separate cylindrical chambers, which would be launched by means of 182 ft-long three-stage rockets and guided into a cluster in the same orbit for assembly in space.

This sounds more difficult than it is, given really-efficient guidance systems. There would be no question of having to do a lot of complicated construction work in space, because each of the 15 components for the rim of the wheel, five spokes and three hubs would be completely equipped internally before launching and would be designed to lock together by simple couplings, with air-locks to provide access from one to the other after assembly.

Technicians to assemble the station would be carried up to the cluster of 20 ft.-long, 10 ft.-diameter components in specially-designed "astro-tug" vehicles. Each carrying a crew of three, these tugs would be launched with the help of huge rockets and would enter the same orbit as

the pieces of space-station, after which they would be used to round up the units and hook them together in much the same way as a shunting engine makes up a railway train.

There would be no need for the tugs' occupants to wear heavy space-suits, because they would never need to leave their pressurised cabins. Instead, the pre-fabricated parts of the station would be gripped and moved by mechanical arms projecting from the tugs.

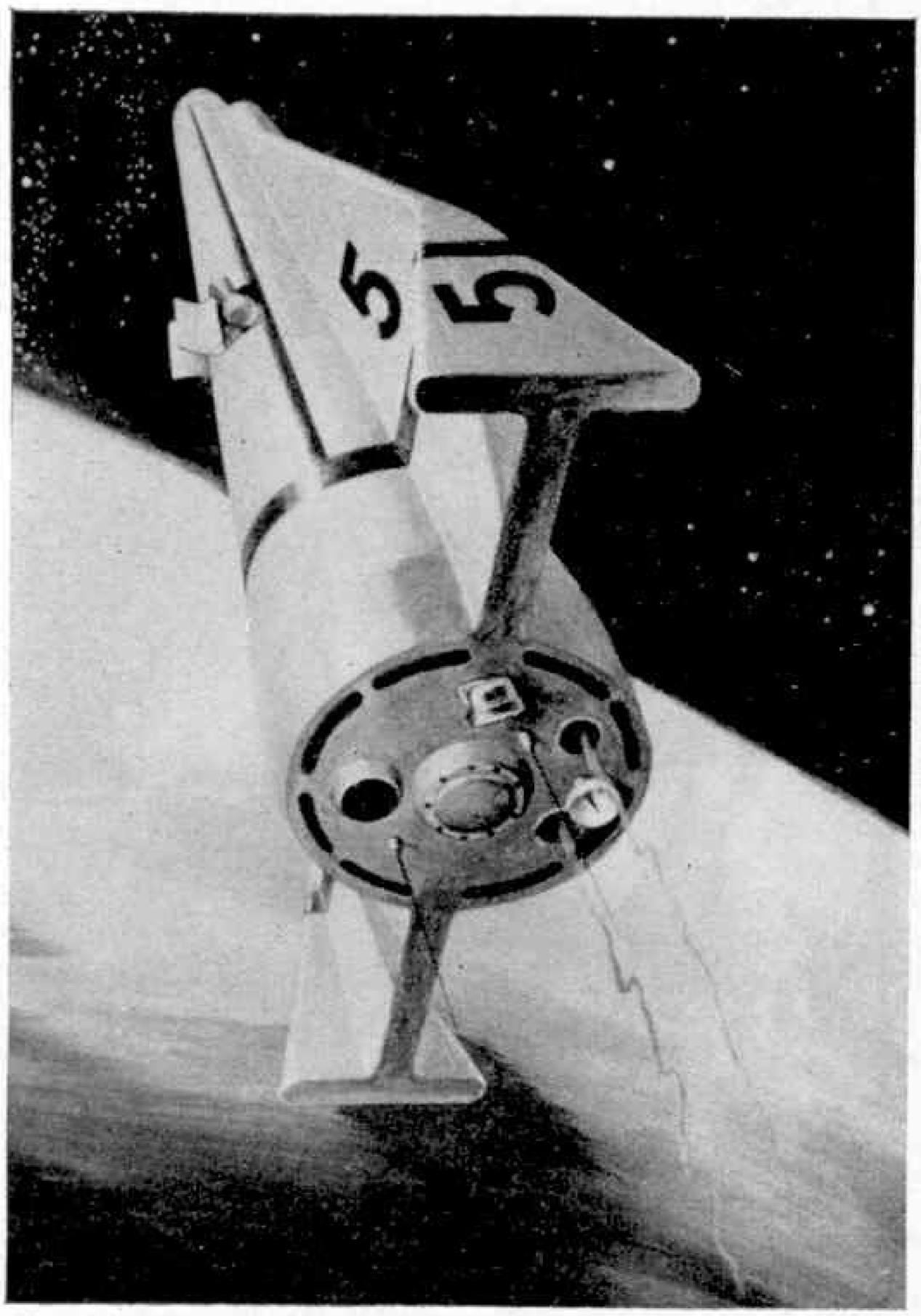
If this still sounds a bit far-fetched, remember that when two objects are in orbit together they travel at precisely the same speed, so that to the men in the tugs the pieces of space-station would appear to be floating motionless in space, even if they were actually speeding round the Earth at 18,000 m.p.h. As a result, the scientists who designed the space-station believe it could be assembled and in use within 12–30 days of the launching of its components from Earth.

Once in orbit, it would stay there indefinitely, and would simply need re-stocking with food and supplies every few months. The scientists working in it would consist of an astronomer, two physicists, a chemist-photographer, a biologist, two electronics engineers, a machinist and two experts on space medicine. They would be ferried to and fro in missile-launched re-entry vehicles like the one illustrated on this page, and could live on board without space-suits.

There would be plenty for them to do, because the compartments around the rim of the wheel would include a chemistry, photography and hydroponic laboratory; a space medical laboratory and sick bay; a physics laboratory; an electronics laboratory; and a machine-shop to make up special equipment and handle maintenance work; while the central hub would contain three divisions devoted to a space medical laboratory; an astronomical and weather observatory; and a central power-control house.

In addition, the rim would contain five compartments for living quarters, with showers, toilets and radio for communication with Earth; two compartments to house water purification, pressure control, air conditioning and heating systems; a storage compartment for food, oxygen and water; a galley; and even a combined dining room, library and recreation room.

In fact, taken all round, it sounds a lot more homely than most laboratories on Earth!



The scientists would be ferried to and fro in missile-launched re-entry vehicles like this one.

FLAGS

The excellent series of *Observer's Books* published by Frederick Warne and Co. Ltd., now includes one dealing with Flags, price 5/-. This has been compiled by I. O. Evans, F.R.G.S., who has provided his readers with a wealth of information on flags in general, with incidentally a good index, and on many individual flags of special interest. Thus we have accounts of such matters as the Royal Standard and the personal Standards of the Royal Family, as well as our national flags, and of the origin of the flags and badges of the Dominions and Colonies, of the Stars and Stripes and many other national flags.

There is a copious series of illustrations, including a large number in colour. These show not only flags, but also badges and emblems displayed on them. The range extends to the house flags of shipping and shipbuilding companies, etc.

The Romney, Hythe and Dymchurch Railway

By R. A. H. Weight

IF you are in the coastal neighbourhood of Folkestone or Romney Marsh you will probably notice red East Kent omnibuses destined for Hythe, Light Railway Station. You may also see posters or signs drawing attention to the "World's Smallest Public Railway". Surely the latter are enough to attract enthusiasts or sightseers of all ages! And they describe indeed the Romney, Hythe and Dymchurch Railway, which certainly has that distinction.

When I looked round and travelled part of the course of this line last year I found it and its appurtenances as fascinating as when I first visited this lively, small scale concern over 30 years ago, or when I travelled over it on subsequent occasions. Many innovations and developments have enlivened matters and improved accommodation for passengers since the part-way public opening away back in 1927.

There are or have been other 15 in. gauge railways carrying fare paying passengers over short distances, but the "Dymchurch" claims to be the only public one operated over a longish route according to Ministry of Transport requirements, with signalling and other equipment based on full scale practice, including interlocking of points, vacuum brakes and so on.

The rail gauge is less than one-third of the standard 4 ft. 8½ in. As with full size rolling stock, however, there is considerable overhang; in this case the jolly little covered, or partly-open, bogie carriages are 2½ times the width of the track gauge. A number of the dimensions of the splendidly turned out and most realistic steam locomotives hauling the frequent passenger trains that run in summer are approximately one-third of equivalent full size. The boilers are much smaller than that by comparison, though they carry the high working pressure of 180 lb. per sq. in. The maximum height from rail to chimney is between 4 ft. 6 in. and 5 ft., and the total length with tender is about 28 ft. The locomotives complete in working order weigh some 9½ tons, and although small there is nothing toylike about them, for they are capable of handling quite long trains at speeds up to 25 m.p.h. on level.

"Hurricane" leaving the turntable at Hythe Station, on the Romney, Hythe and Dymchurch Railway. Photograph by courtesy of Shoesmith and Etheridge, Hastings.

I travelled behind No. 8 *Hurricane*, one of the original batch based on the Gresley L.N.E.R. unstreamlined Pacifics. It is finished smartly in blue, and is fitted with smoke deflectors. The miniature replica of an L.N.E.R. corridor tender displays also a polished brass plate announcing that this engine hauled the special train in 1957 that carried H.M. The Queen, H.R.H. The Duke of Edinburgh and their children over the line.

Other nearly similar Pacifics built in 1925-7, several of which I saw at work, are numbered 1, 2, 3 and 7, and are named

Canadian type Pacific No. 10, "Doctor Syn", at Dymchurch during a busy period. Photograph by R. F. Roberts.

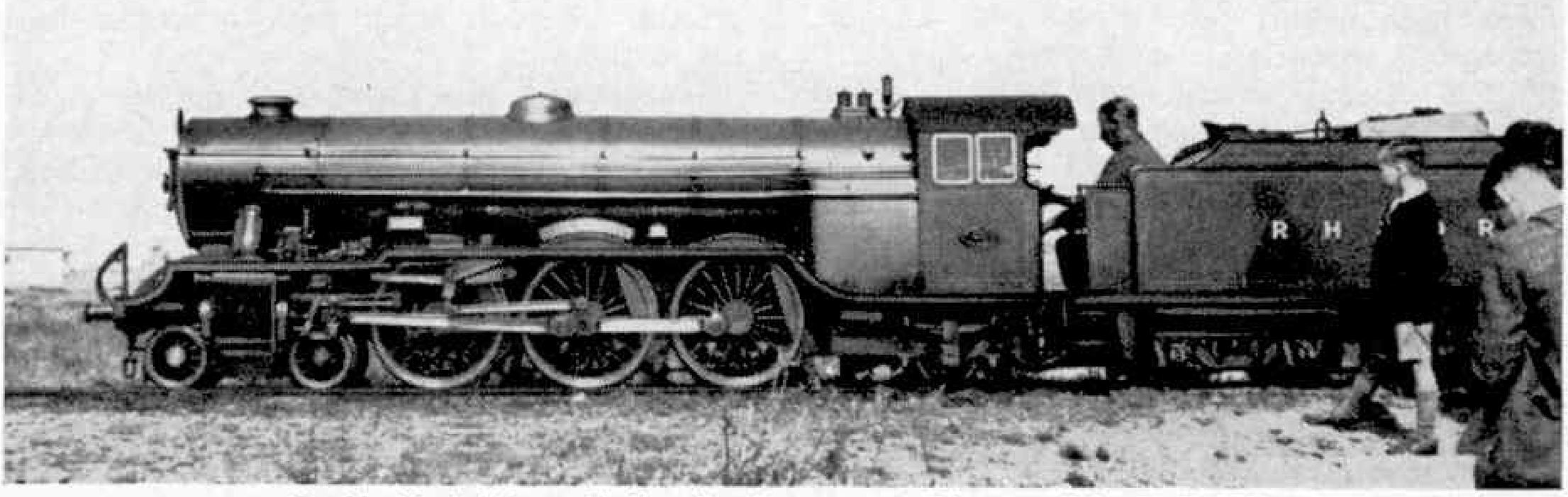
Green Goddess, *Northern Chief*, *Southern Maid* and *Typhoon* respectively. They have two cylinders, piston valves, superheaters and Walschaerts valve gear. In addition there are two powerful 4–8–2s having smaller diameter driving wheels, numbered 5 and 6 and named *Hercules* and *Samson*, with two quite different looking 4–6–2s Nos. 9 *Winston Churchill* and 10 *Dr. Syn*. These latter Pacifics have Canadian style boilers, cabs and fittings with high framing. Locomotive No. 4 was a tiny ex-German 0–4–0 tender tank used during construction of the line but not much afterwards. Two petrol-driven units are often in use for shunting and depot haulage.

Most of the bogie tenders used are more modern, carrying 15 cwt. of coal and 360 gallons of water; their axles run on roller bearings. Colours vary — green, amber, blue, black, maroon, lined out— presenting quite attractive variety.

Passenger coaches are mostly painted green and cream. There are bogie flat wagons, marshalled in passenger trains, for conveyance of cycles, perambulators, baggage or parcels, as well as two goods vans, and four-wheeled hopper wagons for ballast and service purposes.

The system extends for nearly 14 miles from Hythe to Dungeness. The former, the historic town not far from Folkestone, has no B.R. passenger service. The R.H. and D. terminus has an overall roof, four platform tracks, engine lines, turntable and signal box, decoratively appointed. At Dungeness, that famous cape on the S.E. Kent coast, there is a turning circle on the shingle close to the lighthouse and signal station. The overall journey takes just over one hour.

From Hythe to New Romney, 8¼ miles, the original and normally busiest section, there is double track with fencing, some fine bridges and impressive little stations at Dymchurch and New Romney. The latter is the headquarters of this privately owned, friendly line, where there are sidings and terminal tracks, running shed and workshops where locomotive and rolling stock repair, construction and maintenance work is carried out. An added attraction is a fine exhibition open to the public in summer on payment of a small fee. This is housed over the carriage shed called "Model Land" and includes a large "free lance" gauge 0 (*Continued on page 333*)



Pacific No. 1 "Green Goddess" at Dungeness. Photograph by R. F. Roberts.

Birds of the Sea-shore

By Trevor Holloway

THOSE of us who love the sea must surely love the sea birds too. The gull and gannet, the guillemot and tern are a joy to watch in flight as they wheel and turn or glide against an inshore breeze. Their peculiar and often plaintive cries seem to breath the very spirit of the restless waters above which they perform their fascinating aerobatics.

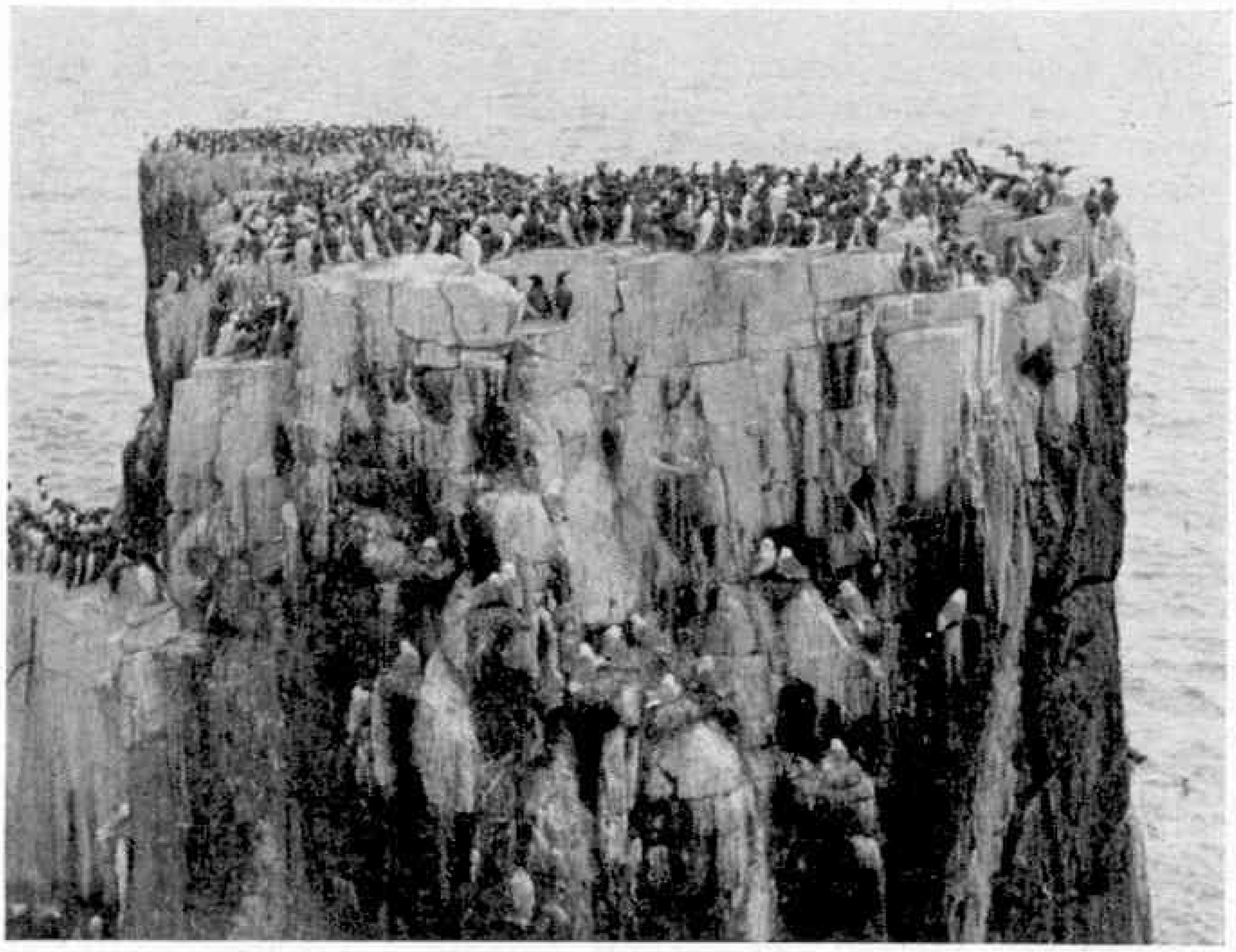
A study of the bird life of our shores is a holiday activity of absorbing interest. Our sea birds are so numerous and varied in their ways of life that even experienced ornithologists are constantly discovering new and surprising facts about them.

For centuries past, certain species have claimed a rocky promontory or a particular stretch of shore as their rightful nesting places. These colonies, often with populations running into countless thousands, cause us to wonder if the day will come when the small fish that form their chief diet will be completely exterminated. A colony of say ten or twenty thousand terns must consume an enormous quantity of fish every day.

"Old Nick", as the cormorant is often termed, is said by fishermen to consume many times its own weight in fish every day. This may be a trifle exaggerated, but at any rate the bird can swallow half a pound of fish at once without the slightest difficulty. He has also been known to gulp down a 2½ ft. conger eel, while in another instance a cormorant died from exhaustion after trying in vain to swallow an immense mullet.

A word of warning—you will be well advised to think twice before visiting a cormorant colony, as your clothes and shoes will probably be ruined. No amount of washing or cleaning can remove the aroma after you have ploughed your way through a thick layer of decomposed fish and other filth! It is partly due to its squalid habits that many birds shun its company. When the parent bird returns to its young with a full crop of fish, there is such a mad rush by the youngsters that much of the fish falls to the ground where it is allowed to remain and rot in the sun.

Guillemots also have strange ideas on home comforts. If you observe a colony through a pair of field glasses, you will see a state of affairs a thousand times worse than the crowded beach of Somewhere-on-Sea on August Bank Holiday! So great is the congestion that any returning bird just flops down in the centre of that teeming mass and blunders its way over nests and eggs—and fellow guillemots!—until by some miraculous means it reaches its own particular few square inches of territory.



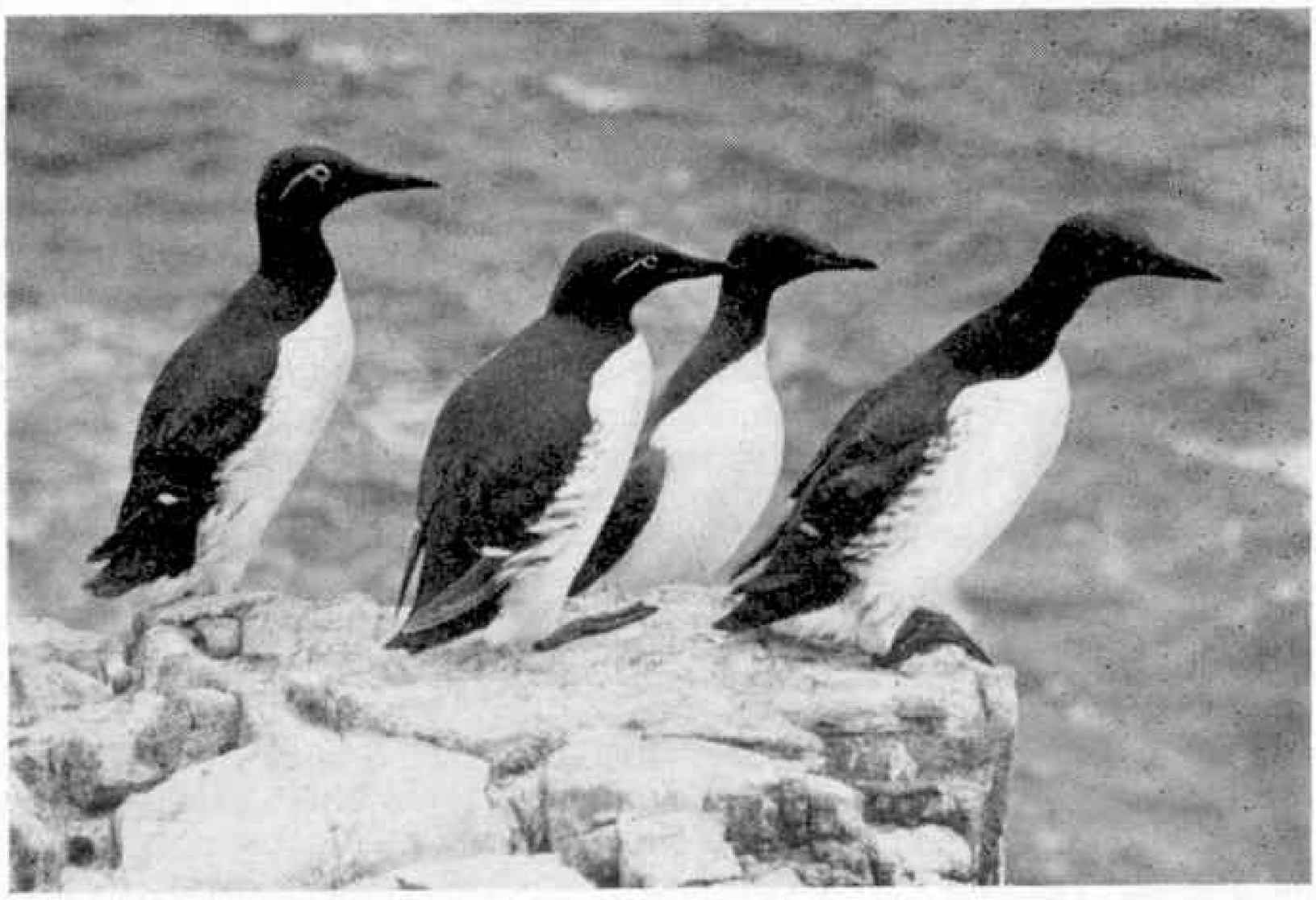
Guillemots, with Kittiwakes below, on the Pinnacles, Farne Islands, off the coast of Northumberland. The illustrations to this article are from photographs by Eric Hosking.

The whole colony is thus constantly being "stirred up", so to speak, with the result that the unfortunates on the fringe of the rocks are being repeatedly pushed off into the sea. This same state of Bedlam has been the order of things for thousands of years, so one supposes it does not worry them very much. Despite all this commotion, the guillemot makes no attempt at building a nest to protect the single egg it lays and one marvels the egg survives intact long enough to hatch out.

Great Black-backed Gulls.

Almost as numerous as the guillemots are the razorbills, so named by reason of their broad, razor-shaped beaks. Although they are resident birds, they spend the greater part of the year at sea, returning to nest in colonies, often in company with guillemots and puffins. As in the case of guillemots, the razorbills lay one egg only and do not trouble to make a nest, yet their numbers are steadily maintained. The egg, incidentally, is so shaped that it will not roll off the rocky ledge on which it is laid, but merely rolls round in a circle.

Of the numerous species of gulls, the great black-back has the reputation of being the villain of the family. It is as large as a goose—up to 37 inches in length—and much more powerful. It has wicked, bullying ways, and will cheerfully gouge out the eyes of sheep and lambs. Its diet gives us a good idea of its character. It ranges from carrion, especially dead sheep, injured or helpless ewes, rabbits, rats and moles, to many kinds of sea birds and their eggs and a variety of wildfowl. As a sideline it consumes considerable quantities of crabs, starfish, worms and vegetable matter. Some idea of its enormous appetite can be judged from the fact that it will dispose of a whole brood of ducklings at one sitting!



Guillemots in the Farne Islands. The two on the left are brindled.

The question is sometimes asked: "Does the great auk still survive?" The experts tell us the last British specimen was seen in 1834 and that this great sea bird is now completely extinct. It was a huge dark-coloured bird with a white waistcoat and wings too small to enable it to fly, which undoubtedly resulted in its final extermination. Even a stuffed specimen costs over £700 today, and one naturalist has suggested that a

real live specimen would easily fetch £10,000.

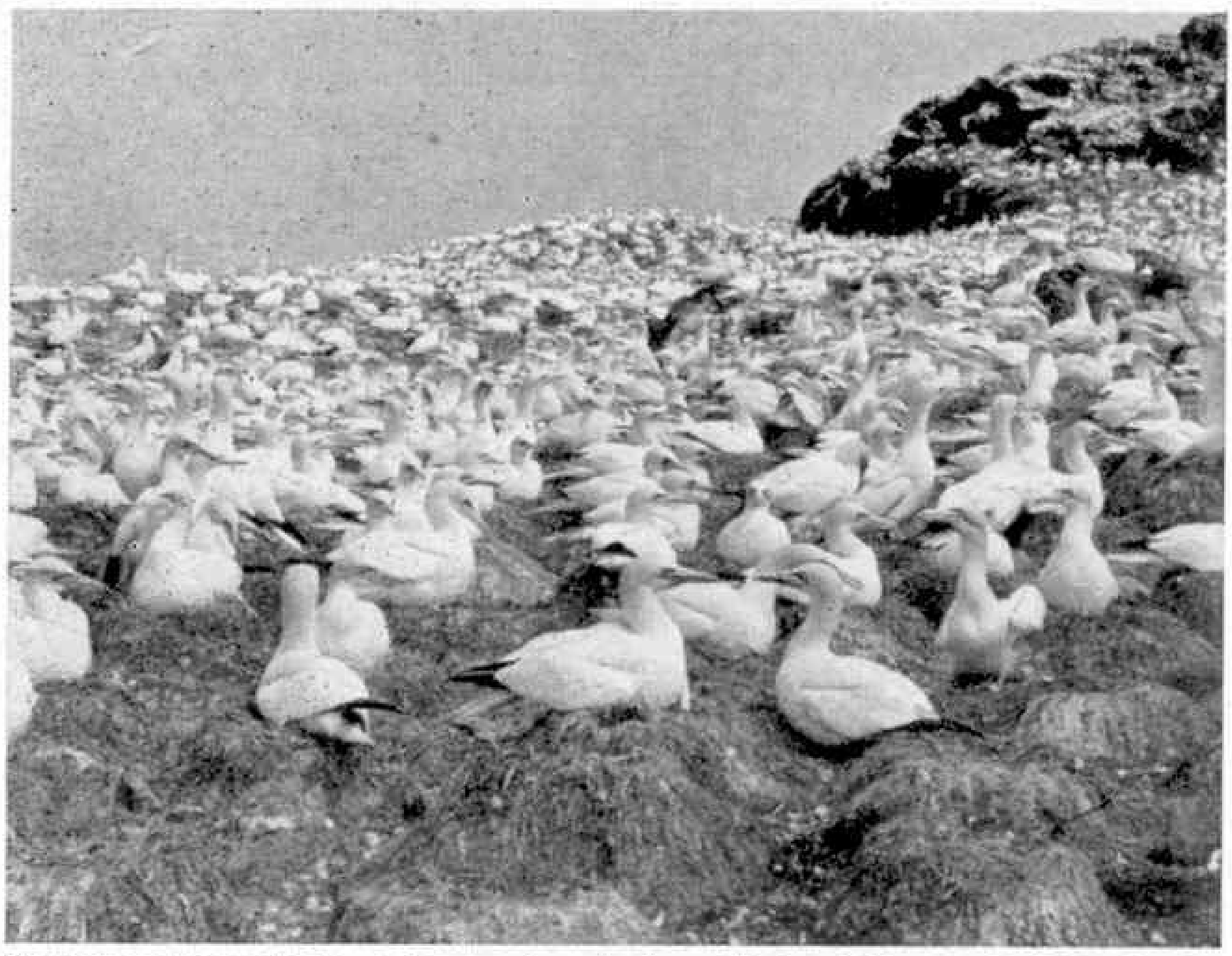
No article on birds of the shore would be complete without mention of the puffin—one of nature's oddities and often termed the clown of birdland. The male bird grows a comical-looking and colourful parrot-like beak especially for his courting days, but as soon as the family is reared it sheds this quaint decorative "lady-lure" and becomes an almost drab and insignificant-looking bird once more.

Its solitary egg is laid in a tunnel, usually in the soft ground at the top of a cliff, and the puffin can burrow as skilfully as a rabbit if necessary. Sometimes a cliff-top may be honeycombed by puffins' burrows. They are more or less a silent race, but they can be heard "snoring" in their burrows at night!

Besides having something of a clown's appearance, the bird has the reputation of being no mean juggler. Ornithologists have long been puzzled as to how the bird can catch as many as ten fish and hold them in its beak at the same time. How can it open its beak to grab another fish when it has several in its beak already? When the breeding season is over the puffins spend the rest of the year at sea, not returning to our shores until the following spring. There's a lot of truth in the old saying that one cannot always judge from appearance. The puffin may look like a clown, but he's far from being one!

The gannet is the largest of our sea birds, with a wing-span of more than six feet. It nests in colonies numbering many thousands of birds, but these nesting sites are chiefly confined to a few islands off the British coasts—Grassholm, in Wales, and in Scotland Ailsa Craig, Bass Rock, St. Kilda and a few islands in the Orkneys, Shetlands and Outer Hebrides.

No other bird can surpass the gannet in the mastery of the air. You may see it sailing and soaring on outstretched, motionless wings at heights up to 300 ft. When it sights its prey, usually herring, mackerel, cod, salmon or whiting, the gannet half-closes its wings and power-dives down into the water at incredible speed, entering it with a splash, and disappearing beneath the waves. The prey is swallowed under the water and the bird eventually surfaces a considerable distance from the spot where it dived. Up into the air it climbs again to resume its scrutiny of the water below.



Gannets on Grassholm, a famous haunt of sea birds off the coast of Pembroke, Wales.

A diving gannet is a sight never to be forgotten. That downward, headlong swoop of astonishing velocity, terminating in a shower of spray, is a breath-taking spectacle. It is said that a gannet never misses its prey—and we may well believe it.

The feeding habits of sea birds is a study in itself. On stretches of smooth wet sand you may see the commonest of our gulls, the herring-gull, performing what seems to be a curious kind of "mark-time" dance, raising and lowering each foot in turn, bringing them down with a smart "slap" on to the sand. The purpose of this comical performance is to bring buried worms to the surface. Another of the herring-gull's labour-saving ideas is to carry molluscs and crabs up to a height of about thirty feet and then drop them on to a rock to smash the shells.

All these things, and many others, you can see for yourself, so when packing for a seaside holiday, don't forget a pair of field glasses and a pocket edition of a book on the sea birds of Britain.

Giants of the Countryside

by

John Mannering

ONLY just in time, it seems, a number of our County Councils and a few right-minded individuals have stepped in to save from decay some of the remaining windmills that still grace our countryside.

Like the sailing ship, the windmill was brought to perfection before the close of the last century. But by then the writing was on the wall; for with the growth of the steam driven mills in the larger towns, and the introduction from Hungary of the process of milling with steel rolls in place of the ancient and traditional millstones, the watermills and windmills slowly fell into disuse. A few have survived by grinding corn and meal for cattle. But even this has proved uneconomic compared with the work done at the great port mills, and hardly any mills can remain standing without some help from the County Council or some other interested body. A windmill quickly falls into disrepair unless a constant watch is kept on the condition of the sweeps, the fantail, and all the woodwork exposed to the weather.

The few mills shown here are excellent examples of different types, and owing to the energetic steps that have been taken to preserve them, they will long serve to remind us of the times when growing corn, grinding it into flour and baking the bread made from it were tasks accomplished within each small community.

Chillenden Mill, which stands in open country some miles inland from Dover, is a good example of a post mill, the very earliest type. It is so called because, in order that the sweeps may be made to face the wind, which they must do to obtain the maximum power from the wind, the whole body of the mill turns on a huge central post that runs up through its centre and is supported by the open trestle work shown beneath the mill. This central post bears much of the weight of the entire building. The mill was turned into position by the miller pulling a great beam, sometimes with the aid of rope tackles, that protruded behind and was often supported by a large cart wheel.

Chillenden Mill, near Dover. This fine post mill was recently repaired and put in good order by the Kent County Council. The illustrations to this article are from photographs by the author.

Besides being a very laborious business, this had to be attended to by day or night if a shift of wind came. For if the wind blew strongly with the mill back to the wind, or "tail-winded," it might be toppled over. It also meant that in squally weather, when the wind frequently changed direction, between perhaps south-west and north-west, or between north and east, the miller had to follow these shifts and keep his mill facing straight into the wind, or lose a great deal of its power.

In the sixteenth century there began to appear tower mills, or "smock" mills, so called because they resembled in shape the old countryman's smock. In such a mill, the main tower is built firmly on the

ground, generally of wood on a brick base, or sometimes wholly of brick; and only the "cap", which bears the sweeps and the windshaft, turns to face the wind.

This was a great advance, and was further improved in **1745**, when Edmund Lee invented an automatic device for keeping the sweeps in the eye of the wind. This device, now called the "fantail", is shown in the picture of Barham Mill, near Canterbury, which is one of the few mills kept in perfect running order, down to the smallest detail.

The fantail is a small wind-driven wheel, carrying about six paddle shaped blades and set at right angles to the main sweeps. It is clear that when the mill is facing the wind, the fantail remains stationary; but if the wind changes slightly and begins to blow sideways against the fantail, it will begin to turn. Working through a series of gears, it then slowly turns the huge cap back into the wind. Inside the cap there are rollers that allow it to turn easily on an iron rail or curb fitted to the top of the tower of the mill.

The French mill at Coquelles near Calais is worthy of note because the former mill building on this site was destroyed during the war, and this existing mill, which was originally situated close to the Belgian frontier, was completely dismantled, transported and re-erected at Coquelles. It is now in full working order and, unlike most of the English mills, still makes flour from wheat grown in the fields nearby.

This mill is of further interest on account of its sweeps, which are of the earliest and most simple form, consisting of a wooden frame, over which is stretched a length of canvas or "sail". This can be seen in the furled position in the photograph. These devices are known as "common sails". They probably made the most efficient use of the wind, but they suffered from the great disadvantage that every alteration in the strength of the wind was reflected in a change of speed of the mill. This made it difficult to achieve constant grinding with the mill stones. Further, if the wind increased very much the mill had to be stopped, and each sweep brought in turn to the perpendicular position to enable the miller to reduce the amount of canvas on the sweep.

The miller and the sailor in those days had a great deal in common, for their lives were intimately bound up with the power and direction of the wind. They became very skilful in foretelling changes in the weather, for indeed their livelihood depended upon it, and they thought nothing of turning out to work in the middle of the night if the wind served.

Early in the nineteenth century Sir William Cubitt brought out what is now known as the "patent sail", which was the perfection of various former ideas. Each "sail" is formed from a number of shutters, or small wooden frames covered with canvas, that fit in to the structure of the sweep. They are all joined to a long iron rod running the length of the sweep, which in turn is controlled by the "striking rod" passing through the hollowed out windshaft, which is the axle bearing the sweeps.

Here is a re-built post mill with common sails, to be seen at Moulin le Haut, Coquelles, France. The building on the side contains a "bolter", or dressing machine, for making white flour.

The striking rod is controlled by a chain from which weights are suspended.

The principle employed is that as the wind increases, by a proper adjustment of weights the shutters open and "spill" some of the wind, thus depriving the sweep of a certain amount of power and keeping the mill at a constant speed. This type of sweep is shown in the picture of Barham Mill, and it is possible to see the chain to which the weights are attached, hanging down from the back of the cap.

By the middle years of the last century it will be seen that the windmill had arrived at a highly developed state of mechanical efficiency. When it is remembered that so many of the working parts were of wood and exposed to all weathers in winter and summer, great credit is due to the old millwrights who built and maintained the mills.

That a number are now preserved is most gratifying, and no opportunity should be missed of visiting them, and studying the mechanical ingenuity and craftsmanship with which man once harnessed the power of the wind. They are a fitting monument to a picturesque age.

Barham Mill, Canterbury. This is a smock mill. It has had new sweeps fitted and is in complete working order.

The Romney, Hythe and Dymchurch Railway—

(*Continued from page 327*)

electrically-operated model railway.

An S.R. full gauge siding at the end of the New Romney branch comes alongside into R.H. & D. territory, where the light railway's Kentish coal supplies and other stores are unloaded. Other calling points are in the nature of halts, several serving the numerous holiday camps in the area. Platforms need only to be very low. Level crossings are mainly ungated; prominent warning notices are posted on the roads, and after whistling trains pass over cautiously.

On to Dungeness there is a single track only, without signals. Drivers must be in possession of a tablet or ticket authorising them to proceed on the single line, just as in British Railways practice. The terrain at first is mostly marsh, the hills are farther away; there are views of the Southern single line, and also of Ferryfield Airport, the sea is closer and soon we are in a land of shingle traversed by a few crude concrete roads, with habitations becoming fewer. The Lighthouse is in sight also, with perhaps a liner or smaller ship passing in deep water not far out from the shore. The fascinating little line links that one-time lonely and sometimes bleak coastal outpost with towns and shops, and during the season, commencing in spring, conveys many thousands of residents and visitors.

The steel rails are of the flat-bottomed type spiked on to wooden sleepers that are laid on a bed of shingle ballast. They are shorter and lighter than British Railways standard, though strong and adequate for comfortable travel, considering the miniature dimensions of the railway. The joins between the rails forming one track are not opposite one another as usual on our main lines, but are staggered and are quietly passed over in quick succession.

Road and Track—(*Continued from page 335*)

cars I have driven in recent years. Early in 1957 the Herald was discussed for the first time by the Board of Standard Motors, and in just over two years a motor-car has been produced that will not only give the family man what he wants, with such features as an amazing turning circle, no greasing points, a wide range of seat adjustment, adjustable steering wheel, reserve petrol tap, screenwashers, wonderful visibility, a central handbrake and remarkable engine accessibility, but will provide an excellent basic vehicle for the conversion specialists. For the Herald should prove a winner in circuit racing and rallies.

I found that the Herald, with its independent suspension and rack and pinion steering, handled like a much more expensive car in the sports class. The roadholding is excellent and corners can be taken with great verve and confidence. The car goes just where you want to put it and comes out rock steady. There are absolutely no steering vices. Nor are there any of the road shocks so often transmitted through this type of steering.

I had the coupé, which has a twin-carburettor 4-cylinder engine giving 50.5 b.h.p. at 6,000 r.p.m. as against the 38.5 b.h.p. at 4,500 r.p.m. of the saloon. The short, remote control gear lever, linked with a four-speed box, is a delight to use and the well-proved 948 c.c. engine, as used in the Standard Pennant, gave me 35 m.p.h. in second, 55 in third and nearly 80 in top. Petrol consumption, driven hard and with frequent cruising at 65-70, was over 35 m.p.g.

The brakes, with 8 in. drums at the front and 7 in. at the rear, are quite adequate for hard motoring and should stand up well to competition work.

This desirable motor car is the forerunner of other exciting British cars. Watch out this month for a new baby car that will be just as revolutionary in its own class.

Road and Track

By Peter Lewis

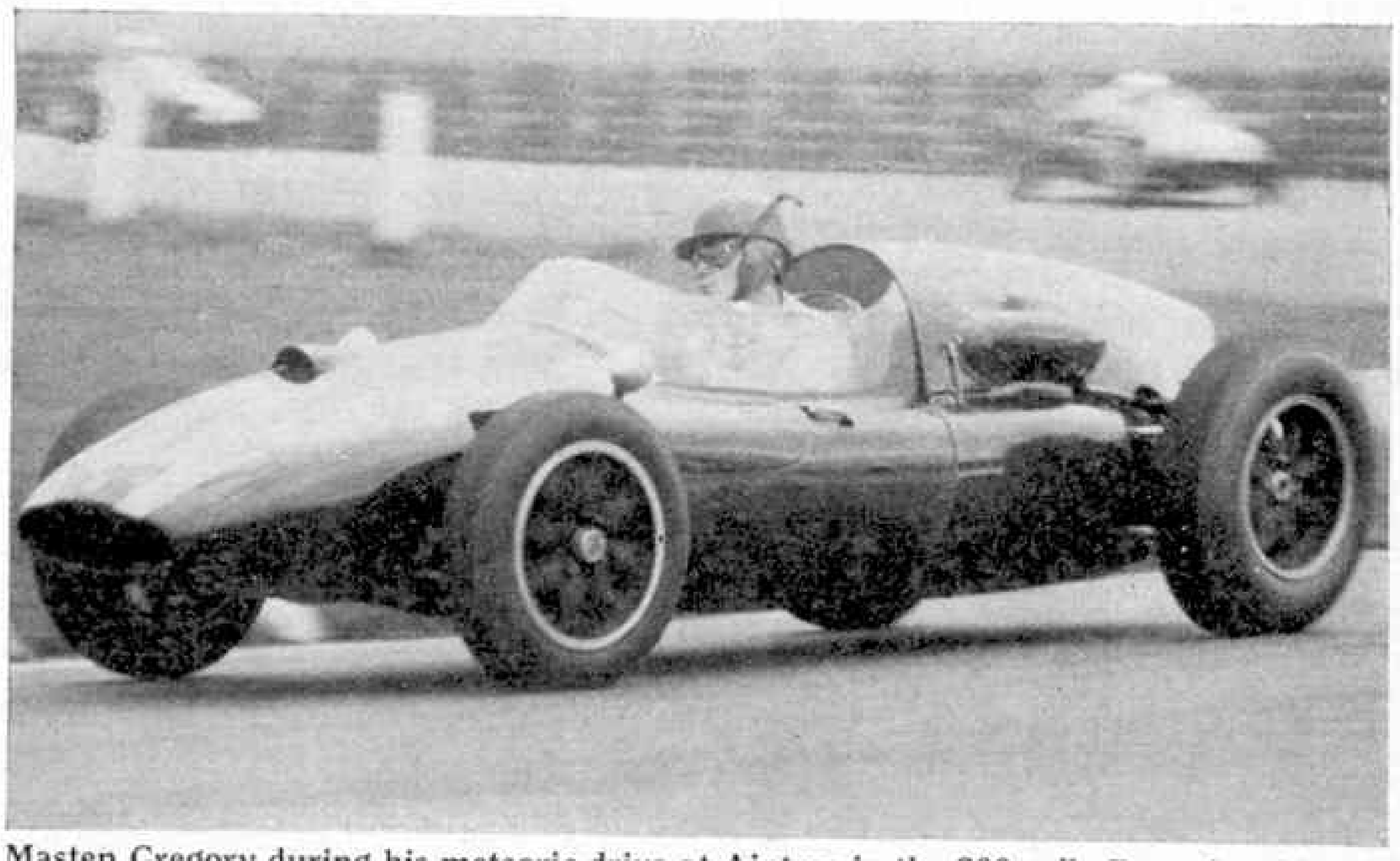
A DRIVER who is really on form this year, and who should be very well placed in the British G.P. at Aintree on 18th July, is the wiry, boyish-looking 26-year-old American, Masten Gregory. The Cooper and Ecurie Ecosse "works" driver was born in Kansas City. He commenced circuit racing in 1952 in America with a privately entered Allard sports car, and then bought a C Type Jaguar.

Gregory's first European season was 1954, the year he defeated the D.B.3S Aston-Martin team at Aintree in September to win the unlimited capacity sports car race with his 4·5 litre Ferrari. Since those early days Masten has driven Ferrari, Maserati and Porsche, and Jaguars for Brian Lister and Ecurie Ecosse. His first place in the sports car G.P. at Spa, Belgium, in May 1958, with an Ecurie Ecosse Lister-Jaguar was a magnificent drive at an average speed of 121·8 m.p.h.

An accident with the Lister-Jaguar during practice for the July Silverstone G.P. Meeting put Masten out of motor-racing until the Italian G.P. when at one stage in an outdated F.I. Maserati, he led the entire field—including Hawthorn, Moss, Brooks, Behra and Phil Hill.

In April this year at Aintree, he put up fastest lap time for the 200-mile race and led the field for 19 laps, setting a terrific pace until clutch trouble forced him out of the running. At Monaco, for the first F.1 Championship event of the season, he was off colour following a crash with an Ecurie Ecosse Lister-Jaguar at Silverstone the previous week, and sportingly offered his Cooper-Climax to co-driver Brabham, who met engine trouble in practice. With the better engine, Brabham won the Monaco G.P. whilst Masten toured round for a few laps and was the first driver to retire. This sporting gesture from the American driver is typical of his friendly, cheerful nature.

On 31st May, Masten came third in a Cooper in the Grand Prix of Holland at Zandvoort, Jack Brabham also in a Cooper being second. The winner was J. Bonnier in a B.R.M., that car's first Grand Prix win.

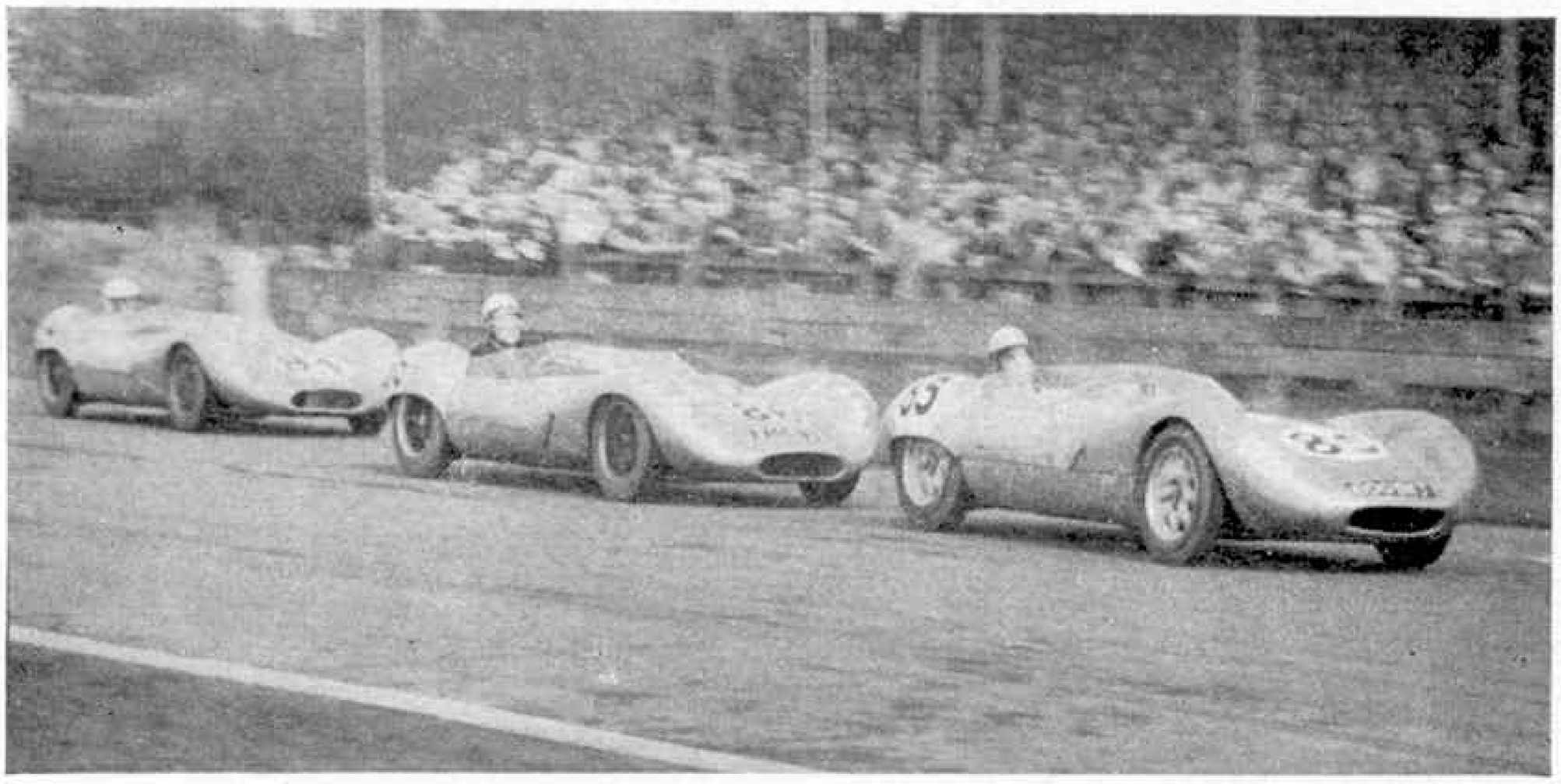


Masten Gregory during his meteoric drive at Aintree in the 200-mile Race, in which he led Stirling Moss, the Ferraris and the B.R.M.'s for 19 laps.

Lola!

Two cousins, Eric and Graham Broadley, have made a tremendous impact in sports car racing this season with their incredible Lola cars, powered by Coventry-Climax engines. By scoring crushing victories over Lotus at Goodwood, Aintree and Silverstone, the Lolas have brought a breath of fresh air into sports car racing in the 1,100 c.c. class, so long dominated by Colin Chapman's cars.

Like so many other motor-racing people Eric and Graham started in 1956 with a 1,172 c.c. Ford-engined Special—it was called Lola in those early days—which cost them £350 to build, including the engine. In 1957 the car was undefeated in 1,172 c.c. events and, significantly, won the Colin Chapman Cup. Towards the end of the year the first Climax-engined Lola



This is how the Lolas usually finish a race—in first, second and third places. Their secret is in roadholding.

was built in Bromley at a cost of £900. Eric tried the car out for the first time—apart from one or two surreptitious excursions on the public roads—in an actual race at the B.R.S.C.C. National Meeting at the Crystal Palace in July 1958. The beautifully-turned-out 1,100 c.c. car was the object of much comment on the grid for the unlimited sports car race—won by Bueb, Lister-Jaguar—and Eric proceeded to turn in one lap at well over 75 m.p.h.

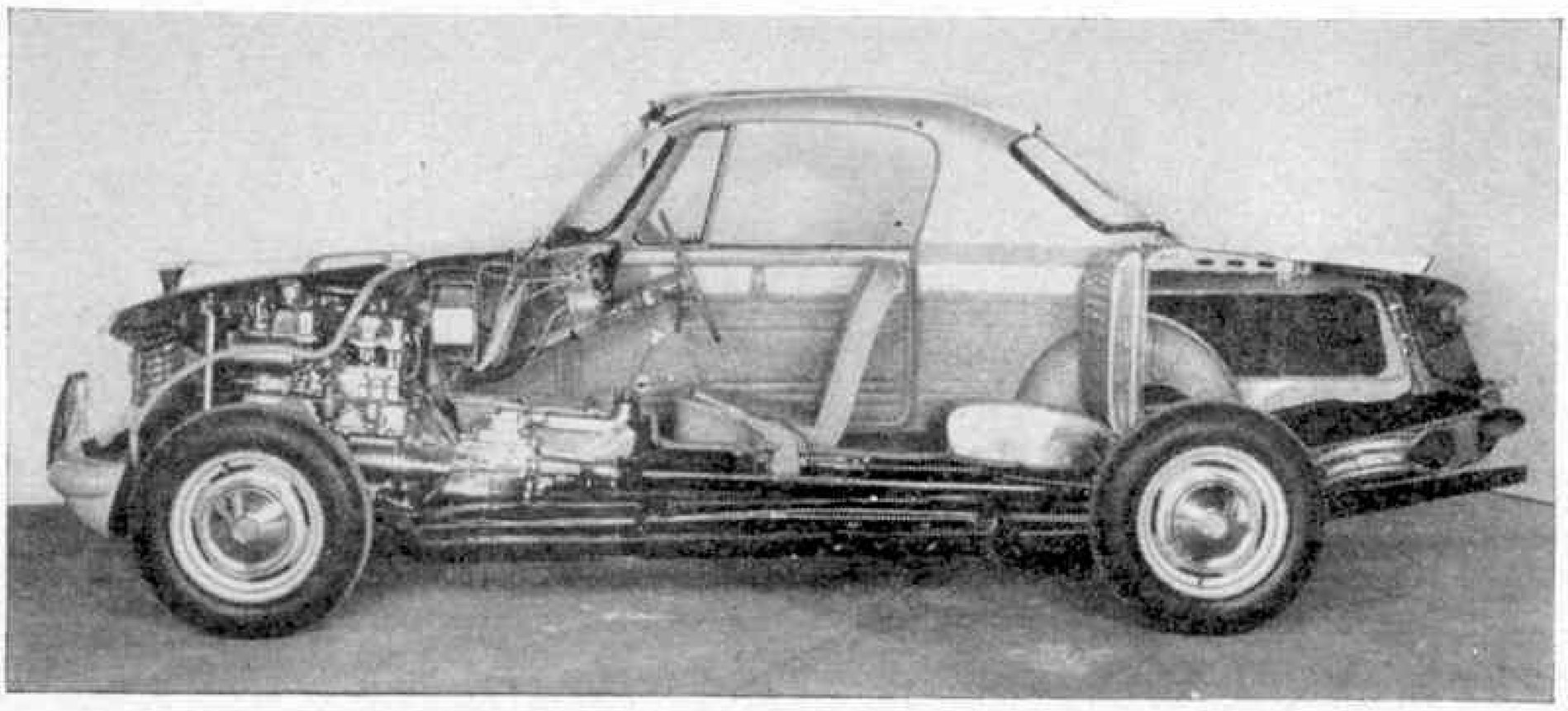
The début of the Lola was followed by entries at Brands Hatch and a Member's Meeting at Goodwood in August, when Eric had his first "prang"—and lost a tooth that has yet to be replaced! The Lola was rebuilt, mainly by Graham and Eric, for the T.T. in September, when Eric selected the wrong gear soon after taking over from co-driver Peter Gammon and put Lola out of the running for a class win. Nevertheless the fantastically fast little car put up fastest lap in the 1,100 c.c. class at 87·45 m.p.h.

Eric has no illusions about his driving, although he is better than he thinks he is. He points out that as production increases he will have less time for racing. There is one "works" car handled by Peter Ashdown, and private entries raced by Peter Gammon, M. Taylor and G. Cox. The plan at present is that they race as a team in major events.

The roadholding of the Lola is superior to that of its rival the Lotus and I am sure that the business partnership of Eric and Graham Broadley will go from strength to strength. In 1960 Lola should be as well known around the European circuits as Lotus.

The Triumph Herald

I was one of several journalists privileged to drive the new Triumph Herald soon after its announcement, and I consider it one of the most exciting (*Continued on page 333*)



Inside the Triumph Herald, the family saloon that handles like a sports car.

The first of the fleet of seven Boeing 707-138 jet-liners for Qantas, Australia's international airline.

Air News

By

John W. R. Taylor

Round-the-World Jet-Liner

At the beginning of August Australia's overseas airline, Qantas, will introduce on its Sydney–San Francisco–New York–London route the first of its fleet of seven 90-seat Boeing 707-138 jet-liners, illustrated above. It is scheduled to cover the 13,929 miles in 38 hrs., including 11 hrs. on the ground at stopping places *en route*. Later the 707s will be used on the airline's round-the-world route, offering the first-ever all-jet service, with a total flying time of only 51 hrs. 45 min.

The Qantas version of the 707 is of particular interest as it is the only one with the short fuselage 134 ft. 6 in. long that is offered as an alternative to the normal fuselage 10 ft. longer. This makes it easy to spot in the air or on the ground. Like all the 707s delivered so far, it has four 12,000-lb. thrust Pratt & Whitney JT3C-6 turbojets; but the first of B.O.A.C.'s 15 huge 707-436 Intercontinentals, with 16,500-lb. thrust Rolls-Royce Conways, has now flown and is due for delivery in the autumn.

Ancient and Modern

Old and new methods of transport met on the Royal Australian Air Force base of Butterworth in Malaya when, as shown below, two Malayan women airfield workers carrying loads in the traditional kanda were photographed in front of a Lockheed C-130 Hercules turboprop freighter.

The R.A.A.F. is using its Hercules aircraft to transport disassembled Avon-Sabre fighters from Australia to Malaya. Delivery by this method takes just 12 hrs., compared with seven days taken previously to fly the Sabres over the same route under their own power in easy stages.

Aircraft Fight Forest Fires

Although lightning and long periods of dry weather caused a 53 per cent. rise in the number of fires that broke out in America's national forests in 1958, the acreage of timber burned dropped almost 15 per cent. Main reason for this improvement is the ever-growing use of aircraft by the U.S. Forest Service.

Among the most potent weapons used against last year's 11,050 fires were fire-retardant chemicals, nearly 1½ million gall. of which were sprayed on unburned trees to prevent fires from spreading. This, plus the practice of dropping volunteer fire-fighters, known as smoke-jumpers, by parachute, enabled outbreaks to be got under control much quicker than a few years ago.

In all, aircraft flew a total of 22,671 hrs. on behalf of

Old and new methods of transport are seen in this picture taken at the Royal Australian Air Force base at Butterworth, Malaya. The aircraft is a Lockheed C-130 Hercules freighter.

Latest flying crane helicopter is this Sikorsky S-60. It strikes a new note in aircraft design, and its unusual features are described on this page.

the Forest Service in 1958, of which helicopters contributed 3,746 hrs. Most of the work was done by private companies under charter, but the Service has 32 fixed-wing aircraft and one helicopter of its own.

Giant Flying Crane

A few months ago I showed you the world's smallest flying crane helicopter, the McDonnell Model 120. Above is shown one of the biggest, the Sikorsky S-60. Powered by two 2,100 h.p. Pratt & Whitney R-2800 piston-engines, it will carry a four to six-ton load for distances up to 100 miles. If it is converted later to turbine-power, its payload will go up by at least a further 2½ tons.

The S-60 makes use of the well-proven rotor system, transmission and power plants of the S-56 transport helicopter, more than 100 of which have been built for the U.S. Army and Marine Corps. It is a real "skyhook." Instead of the usual streamlined cabin, its fuselage comprises a bridge-like boom extending from the cockpit to the tail rotor. Loads are carried under this by a hoist suspended from a point directly under the main rotor.

The glass-enclosed cockpit provides unobstructed vision in all directions, and the co-pilot's seat is designed to swivel 180 deg. to the rear, with flying controls in both forward and aft-facing positions. This provides a clear view of loading and unloading operations, and enables the pilots to position the helicopter precisely for hoist work.

The S-60 can be used for all kinds of jobs. Manufactured products can be airlifted from factories directly to airport, docks and railway yards. Armies can use it to haul missiles, tanks and other vehicles quickly to isolated areas where there are no roads or bridges. Naval vessels can be re-supplied while underway at sea; and the giant helicopter would have no difficulty in towing disabled vessels or pulling out trucks and heavy equipment bogged down in muddy ground.

Special quickly-detachable pods have been designed to carry passengers or cargo. These could be fitted out as emergency hospitals, army field headquarters, radio centres, fire-fighting units or mobile repair workshops, and could be used to house construction crews at remote building sites. In fact the possibilities are endless, as we shall discover in the next few years.

Supersonic Trainer

The Northrop T-38 Talon, illustrated at the foot of this page, is the first trainer designed from the start to teach pilots to fly and fight at supersonic speeds. First flown on 10th April this year, it is a tandem two-seater powered by a pair of 3,700-lb. thrust General Electric J85 lightweight turbojets, which give it a top speed of about 850 m.p.h. Its wings span only 25 ft. 3 in. and it has a loaded weight of 10,960 lb.

* * * *

King Hussein of Jordan became the world's fastest monarch in April of this year, when he was flown at 1,420 m.p.h., more than twice the speed of sound, in a two-seat Lockheed F-104B Starfighter. Later, he was at the controls himself when he passed through the 'sound barrier' in a Hunter trainer.

The Northrop T-38 Talon supersonic trainer photographed during its maiden flight. T-38s will be used at flight training bases of the U.S. Air Training Command.

Slimbridge

Winter Home of the Wild Goose

THE Wildfowl Trust was formed in 1946 to advance the study of wildfowl—ducks, geese and swans—many of which are in danger of extermination through the encroachment of civilisation. Its Headquarters are on the south shore of the Severn Estuary at Slimbridge, in Gloucestershire.

The kind of wild country that wildfowl need is being steadily whittled away by the progress of civilisation. If they are to survive, certain steps will have to be taken, and in order to make sure that these steps are the most helpful ones, much research is still needed into the birds' habits and their life histories and migration routes.

For this kind of research the area known as the New Grounds, on the Severn estuary, is almost ideally suited, and the Trust was therefore formed with the following objects: To promote the study of wildfowl and to undertake any activity which in the opinion of the Council is calculated to promote knowledge of and interest in wildfowl and, in particular, to establish and maintain a wildfowl research observatory at the New Grounds to make a close study of the winter flocks of wild geese and other birds; to ring wild ducks in the decoy pools and wild geese on the marshes for the further study of migration; and to study a comparative collection of live waterfowl.

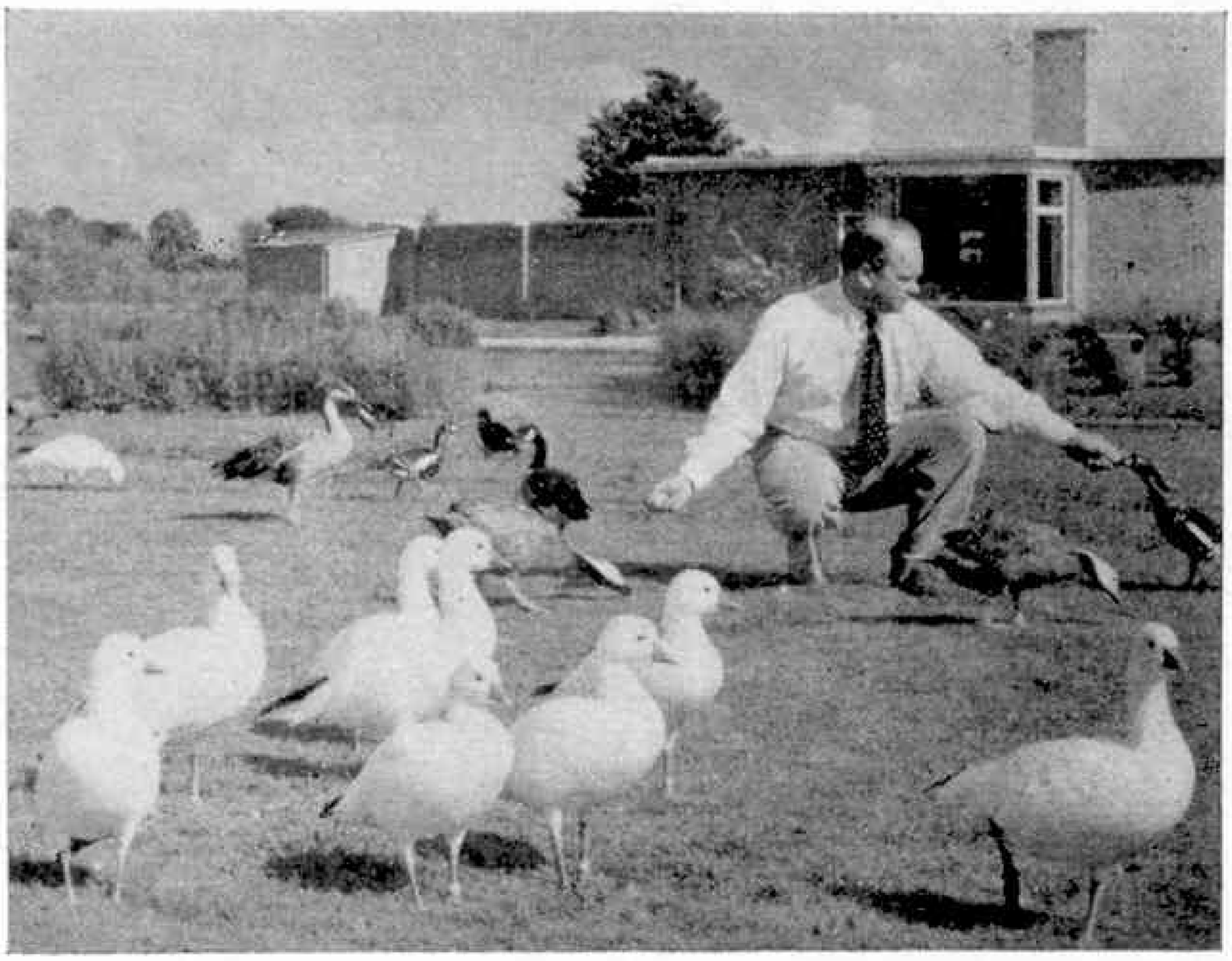
The New Grounds, first so named in 1470, consists of an area of flat alluvial fields reclaimed from the river, some four miles long and one mile wide, lying between the Severn and the Berkeley-Gloucester canal. These fields are protected from the high spring tides by a sea-wall, and outside it lies an area of salting, known as the Dumbles, which is the principal winter feeding ground for between two and five thousand wild geese.

Slimbridge, in Gloucestershire, is the headquarters of the Wildfowl Trust. It is well-known as the home of wildfowl of all kinds, particularly the wild geese that make the saltings there, on the banks of the Severn Estuary, their winter feeding grounds, and here is an article dealing with the aims and activities of the Trust. The picture at the head of the page shows part of a great flock of wild geese taking off from the New Grounds at Slimbridge. Acknowledgment in respect to the article and illustrations is made to the Trust.

Along the sea-wall are a number of Observation Towers overlooking the salting, so that wherever the geese may be feeding it is possible for Trust members to watch them at fairly close range, sometimes less than ten yards. The thrill of watching wild geese at such close quarters is most easily appreciated by those who have had previous experience of their proverbial wariness, but even those who have never seen geese before cannot fail to be stirred by such an intimate view of these magnificent birds. They are mostly White-fronted Geese, but a few Pink-feet arrive early in the season,

and every species of goose on the British List has been seen at one time or another on this marsh.

It is important that the geese themselves should be totally unaware of being closely scrutinised. They have selected these marshes, and kept to them, chiefly because they have been carefully preserved from disturbance by the owners of Berkeley Castle for centuries past. This has been facilitated by the fact that the tidal waters to mid-channel, as well as the New Grounds, have been owned by the Berkeley estate, as indeed they still are.



Peter Scott feeding geese in front of his studio at Slimbridge.

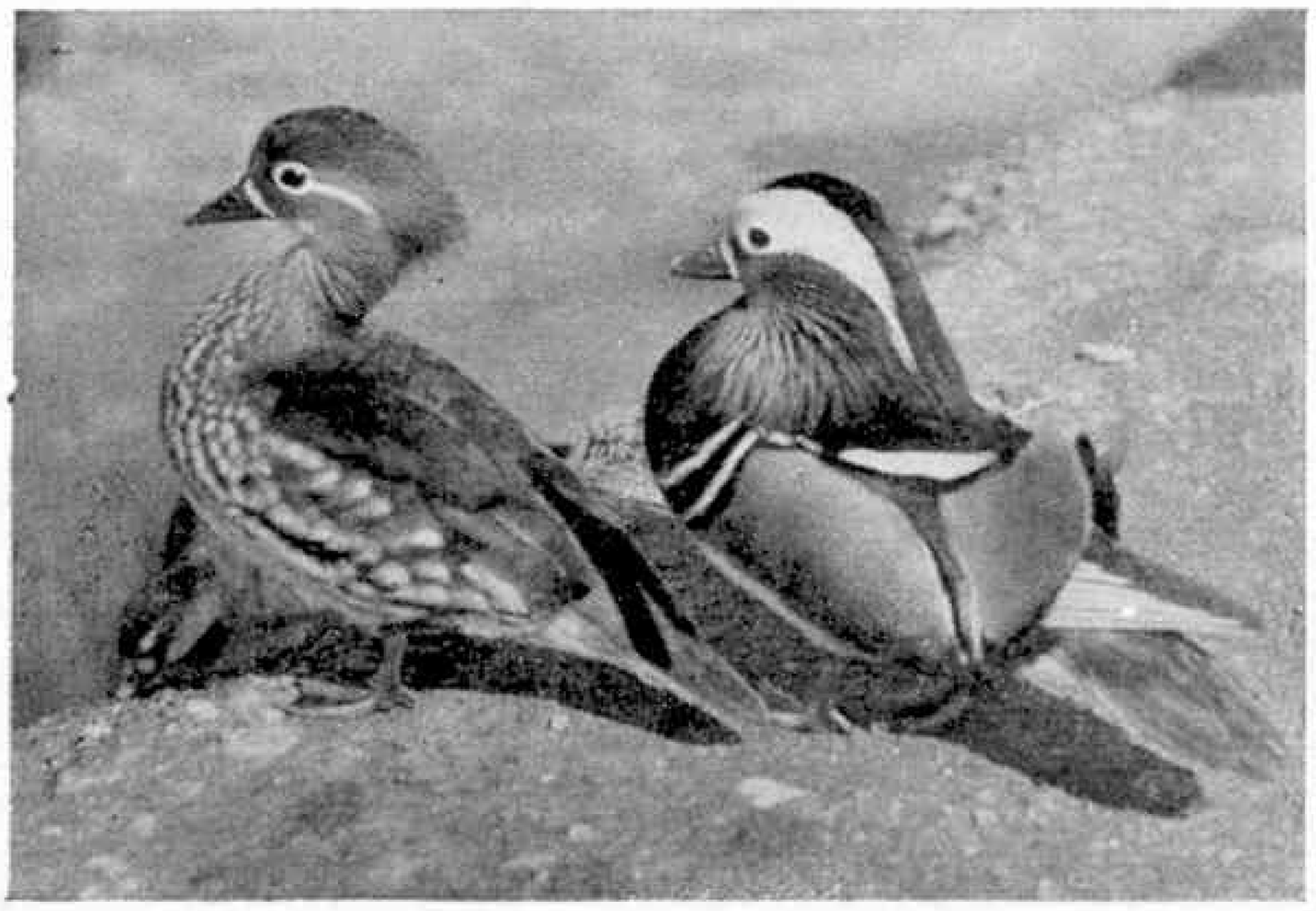
Beyond the Dumbles lies the mile wide expanse of estuary sand and mud on which the geese and countless other birds roost. Some thousands of ducks spend the winter here and large numbers of waders pass through on migration. The broad estuary lying in the heart of Gloucestershire provides a sort of oasis for cross-country migrants, and a number of interesting birds have been seen there in recent years.

The sea-wall passes within 300 yards of the group of buildings which forms the headquarters of the Trust.

Between the buildings and the salting is a small spinney containing a decoy pool of about an acre. This decoy, originally completed in 1843, had fallen into disrepair, but it has been put into full working order again, and the annual catch has passed the two thousand mark. Each year more ducks are caught, ringed, and released again for the study of their migration routes. A Gazebo, or summerhouse with a wide prospect, at the edge of the wood giving a view of the pool is available to members of the Trust and to the public.

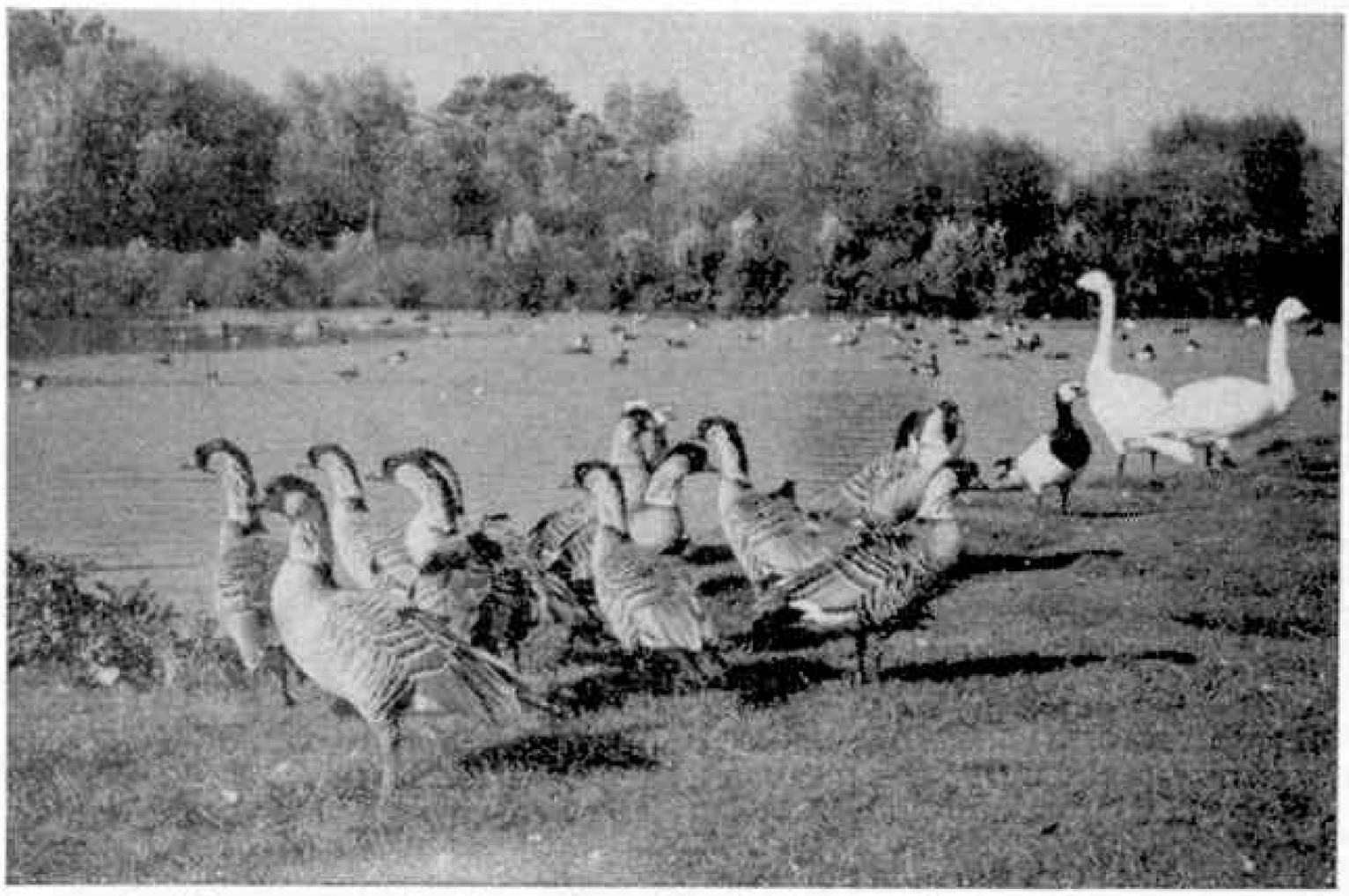
Parts of some rushy fields adjoining the decoy have been enclosed with a fox-proof fence, and special ponds have been dug to make a home for the largest collection of live waterfowl in the world. It is of great value both ornithologically, as an opportunity for the observation of breeding habits, and educationally, as an introduction to the study of waterfowl. Many of them breed and some of their offspring have been exported. In the summer months a hundred different kinds of ducklings and goslings are reared. Usually this is done under a hen or bantam foster-mother, since many ducks and geese make poor mothers in captivity. There are, of course, exceptions and family parties can be seen in the grounds.

Special efforts are being made to breed species that are in danger of extinction.



Mandarin ducks, jewels of the duck world.

For example, the Ne-Ne or Hawaiian Goose, one of the rarest living birds, breeds well, and a flock of 53 now living at Slimbridge is descended from the original three birds given to the Wildfowl Trust by Mr. Herbert Shipman of Hawaii in 1950. The birds in the enclosures become astonishingly tame, and it is especially delightful to have a crowd of these beautiful creatures round one's feet, and feeding from the hand.



A wonderful scene at the New Grounds, the home of many rare geese and other birds.

A wild goose chase is a phrase that has always been used to describe a fruitless errand, because geese are so difficult to approach in the open country they love. But the Trust has found a way to catch large numbers of geese and each autumn makes a trip to Scotland and northern England to ring up to three thousand Pink-footed Geese.

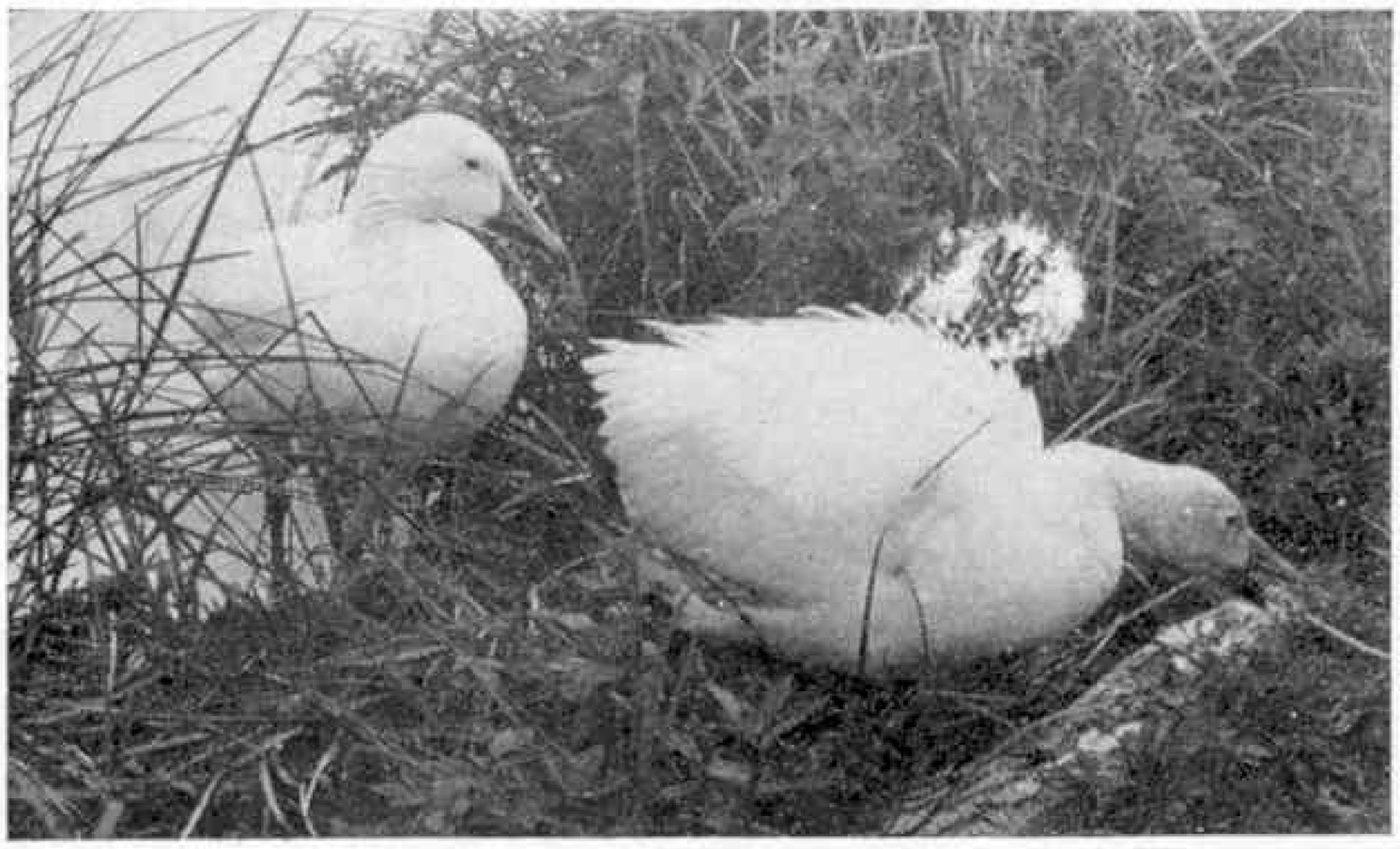
Large nets, sixty yards long and twenty yards wide, are thrown up, over and down on top of a feeding flock of geese. The nets are made of nylon so they are strong and yet light, and they have a small mesh so that the birds do not get their heads and wings through the holes, which would cause them to get very tangled. To carry the nets over the geese smokeless rockets, six to each net, are used. These rush out from holes in the ground and are down again before the birds have had time to realize what is happening. Of course, those birds not under the net fly up, but they often come down a few fields away and start feeding again, and birds have been caught in the same place the next day.

The rockets are set off electrically by pushing a button in the camouflaged hide that we leave near the nets. Two or three people stay in there, the rest of the party go off to make sure that the geese coming in to feed do not go to the wrong field. The "Hide" party is kept informed about what is happening outside by "walkie-talkie" radio sets.

By using this method much has been discovered about the migratory routes of the wild geese, their abundance, and habitat. Much too has been learnt of wildfowl behaviour. Although the Research unit of the Trust is based at Slimbridge, its work covers the whole country and close liaison is maintained with foreign organizations working on wildfowl, particularly those in North America. Expeditions have been undertaken to Arctic Canada, the United States, Lapland, Iceland, Patagonia, Bolivia, New Guinea, Australia and New Zealand.

In 1957 the Trust opened a branch near Peterborough in Northamptonshire — The Peakirk Waterfowl Gardens. This now carries the second largest collection of wildfowl in the world,

(Continued on page 372)



A pair of Greater Snow Geese, birds that are native in Arctic America.

Canada's Big Wheel

by

M. E. Jordon

THE gigantic wooden water wheel seen in the picture on this page is the largest of its kind in North America. It was designed for a somewhat primitive, but nevertheless cheap, method of producing power to operate pumps for a gold mining operation.

The wheel stands on the bank of Perry Creek, in the Selkirk Range in British Columbia, which was the scene of a genuine gold rush in 1867. After the surface gold in the creek bed had then been well worked anything at depth remained elusive because of too much water. But in the great depression of the 1930's an aggressive group had the idea of building this large water wheel to pump out water and so enable them to mine the pay-dirt below.

First a shaft was sunk to a depth of one hundred feet in the solid rock beside the creek. By the time that was done and the miners were ready to begin driving the tunnels into the bedrock gravels, where the water would be encountered, the wheel had been built. It was constructed of lumber cut from adjacent hills. Its diameter is 32 feet and it is 7 feet wide. Each of the 72 built-in "buckets" has a capacity of 70 gallons of water, which is fed from a wooden flume into which Perry Creek was diverted some distance upstream.

The wheel was so well balanced that a child could turn it from the still position, despite its size and weight. At its highest efficiency it developed in theory 112 h.p. and delivered 68 h.p. through a series of gears and belts to the two pumps, one of 1,000 gallons per minute capacity and the other of 500. The water discharged from the pumps into a sluice box, washing away the gravels brought up from the mine and leaving the gold trapped in the riffles.

The wheel operated successfully during 1935 while the men dug the tunnel towards the pay dirt, but heavy snows and severe icing conditions in sub-zero weather forced it to stop during the winter months. Work was resumed in the following Spring. The shaft, which had filled with water, was pumped out with power from the water wheel, and tunnelling had got nicely under way again when the death of G. M. Bell, one of the principals, halted operations.

Mining is important today in British Columbia, where coal, copper, lead and zinc, with other metals are found in many districts. Gold too is produced, mainly from lodes, notably at a mine in the north where it is associated with silver. Earlier gold mining was more spectacular. The precious metal was found in alluvial deposits in the valleys of the Fraser and Thompson Rivers just over 100 years ago and other similar discoveries led to later gold rushes such as that at Perry Creek, where Canada's big wheel was built.

Now, through no fault of its own, the big wheel stands the silent guardian of that ever elusive precious metal below. And it never ceases to be the object of much curiosity to passers by.

Railway Notes

By R. A. H. Weight

Aboard "Flying Scotsman" and "Heart of Midlothian"

It was my first northbound journey by the famous and long-established 10.0 a.m. *Scotsman* for a good many years, on a warm and sunny spring day. A fine photograph of this express at speed behind A4 Pacific No. 60028 headed my notes in the November 1958 *M.M.* For my run the locomotive was No. 60029 *Woodcock*, also stationed at King's Cross, in charge of Driver W. Hoole and Fireman A. Hancox. The handsome 11-coach train weighed just over 400 tons with almost full complement of passengers, and was the same as for my southbound journey reported just over a year ago, except that in addition to the 1st class dining cars for all passengers' use, in which there were three sittings for lunch, there was one of the miniature buffets in the centre of a 2nd class vestibuled coach. This proved very popular.

There was a 3½-min. late start from King's Cross, as officials were making sure that vacuum brake pressure was sufficient throughout the train. With speed restriction we travelled over the new down fast line, through newly completed tunnels and past the rebuilt Hadley Wood station a few days before the official opening and full normal operation of the New Barnet–Potters Bar widening scheme. Very fast running followed with maxima of 90–93 m.p.h. The 41 miles between Hatfield and Huntingdon were covered in 31 mins., and we were through Peterborough, 76¾ miles, in 73¼ min., so winning back to schedule.

There were four slowings due to engineering or track repair work, and three for adverse signals. Impressively, however, after a 70–80 m.p.h. descent from the outskirts of Durham into the Tyneside industrial area, we curved gently on to the King Edward Bridge across the Tyne, thence pulling up in Central Station, Newcastle, fully 3¼ min. early just after 2.41 p.m. Without a stop 268¼ miles from London had been covered in less than 278 min., and there had been some 15 min. delays, due to slowings. A1 4–6–2 No. 60132 *Marmion*, from Gateshead shed, took the express on to Edinburgh, which was reached about 5.0 p.m.

The *Heart of Midlothian* provides an early afternoon departure from London and Edinburgh by the same route, and is similarly formed apart from the buffet coach. The southbound service, which I joined at Newcastle, conveys two Aberdeen–King's Cross through carriages corresponding to those attached to the northbound *Scotsman*, forming part of another train north of Edinburgh. From that city, A1 No. 60160 *Auld Reekie* had arrived slightly before time. The engine and men stationed at Grantham, having worked an express down the same day, gave an excellent performance and apparently with ease and plenty of steam to spare. The steed was one of the 1924-built original type Gresley Pacifics, now A3 No. 60065, *Knight of Thistle*, with double chimney and other new parts. It was manned by Driver W. Kettle and Fireman M. Hibbins, with Driver A. Brown, engaged in the important duty of learning the route before taking over this top-link turn, at the regulator part of the way.

Without exceeding 79 m.p.h. on the level, a steadily fast run from Darlington to York improved by a ½-min. upon the tight 42 min. schedule for 44 miles. With all clear, except for a repair slack past Templehirst, on a lovely evening time was steadily gained. Doncaster was passed at 6.7½; 50 miles covered in 46½ min. and 80 m.p.h. sustained down the gradual descent to the Trent Valley towards Newark, with a succeeding minimum uphill of 54. This gave a mile-a-minute average from leaving York to halting in Grantham at 6.56 p.m. or 7 min. early! So there was an interval before another veteran A3, No. 60049 *Galtee More*, the succeeding locomotive, could leave at due time for the non-stop run on to King's Cross, but I was bound elsewhere.

The "Peak" Class Diesel Locomotives

I was glad to accept a recent invitation to inspect the first of this new main line class, No. D1 *Scafell Pike*, built at Derby. It is a 2,300 h.p. diesel-electric mixed traffic or express unit, type 4, 1CC1 wheel arrangement, having Sulzer diesel engine and Crompton Parkinson electrical equipment. It has a rather imposing appearance in its way, as readers may agree.

The "Heart of Midlothian" speeding along near York in charge of A1 Pacific No. 60124 "Kenilworth". This fine action picture is from the camera of Mr. C. Ord, York.

The first 10 of the class will be stationed at Crewe and used on some principal trains. The others will be numbered D2 upwards and will carry the following names of peaks near the L.M. system: *Helvellyn*, *Skiddaw*, *Great Gable*, *Cross Fell*, *Whernside*, *Ingleborough*, *Penyghent*, *Snowdon* and *Tryfan*.

Derby and Crewe Works are to erect 147 of these locomotives, some of which will carry a higher power rating of 2,500 h.p. They are the largest and most powerful of their kind so far produced in B.R. Shops, or for regular L.M.R. service, and are designed for speeds up to 90 m.p.h. In overall length they are nearly 68 ft. and weigh in all 138 tons.

Summer Timetables and Holiday Peaks

The summer timetables on the Western Region feature a fastest-ever *Bristolian* between London and

Diesel-electric locomotives of the "Peak" class under construction at Derby. These are for service on London Midland main line routes. B.R. London Midland Region official photograph.

Bristol in 1 hr. 40 min. each way at an average of just over 70 m.p.h. start to stop, scheduled for haulage by diesel-hydraulic locomotives of the Warship class. The westbound *Merchant Venturer* leaves Paddington at 11.5 instead of 11.15 a.m.

The London Midland Region is again running *The Welshman*, the day *Irish Mail* and *The Manxman* to and from Euston, for example. King's Cross is handling *The Elizabethan*, the world-record London–Edinburgh, 393-mile non-stop run each way as again advertised, *The Scarborough Flyer* at week-ends, and a new Saturday Sheffield Pullman service, as well as many other holiday and relief long-distance expresses on peak days as required on most British main lines.

Most of the customary cross-country and inter-Regional summer trains connecting towns with holiday resorts are operating again. The Southern is introducing its full electric service between London and the Kent coast, via Chatham, with faster and more frequent timings while providing the usual intensive range of steam, electric and diesel-electric trains along the Waterloo, Victoria and Charing Cross routes on Saturdays, etc. More local and provincial multiple unit diesel services are appearing in various directions.

World's Fastest Start to Stop Run

The Illinois Central R.R., U.S.A. appears to be operating the fastest start to stop schedule in the world—53½ miles in 39 min., an average of 81.8 m.p.h. This run is made as part of the streamlined *City of New Orleans* express journey, between that city and Chicago, a total distance of 921 miles that is covered in about 16½ hours, with very powerful diesel haulage.

The fastest French runs with big electric locomotives on the Paris–Dijon–Lyons route also average 77–81 m.p.h., and there are a number of other mean speeds of 70 m.p.h. or more in France along several long-distance lines. These are often 1st class only and with supplementary fare, some formed of special diesel sets.

Railway Fascination at Newcastle upon Tyne

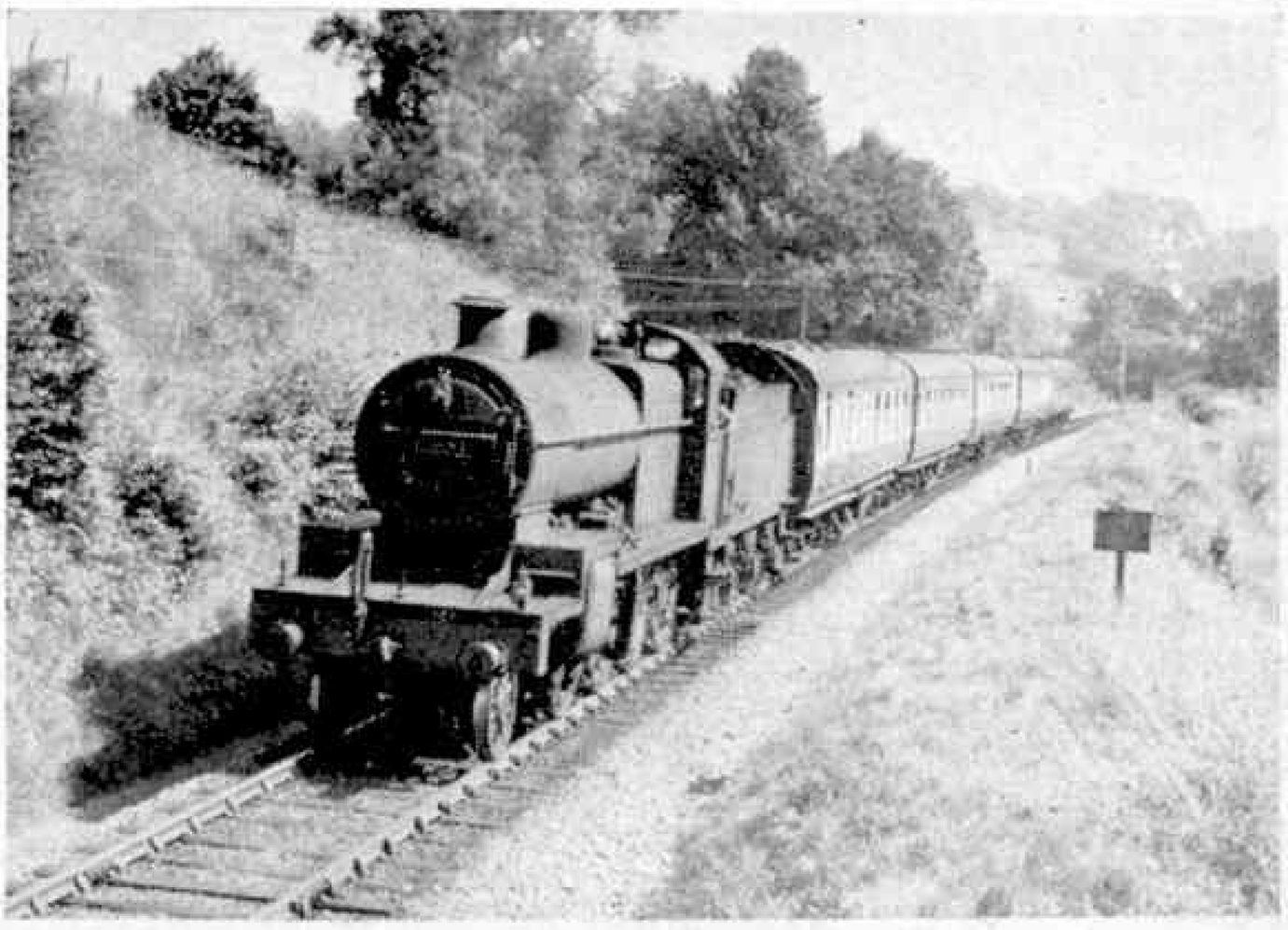
There is much of interest and instruction in and around the spacious Central station, Newcastle, situated in a busy city that is the centre of much north-east coast business and residential activity. There are 15 platforms, located on a curve roughly from east to west including three very long principal ones used by Anglo-Scottish and other expresses in either direction.

By means of a network of junctions and impressive curves trains to many destinations southward may leave in either direction. These have almost at once to cross the wide River Tyne, far below, by either the older High Level Bridge, which also carries road traffic on a lower deck, or the King Edward Bridge giving connection with the Gateshead or County Durham side of the river.

From Central Station there are frequent, old-established electric passenger and parcels services locally to Northumberland coast lines; an increasing number of diesel set trains westward to Carlisle and north-eastward to a number of destinations; and steam passenger and freight on a large scale present a great variety of locomotives and rolling stock on through trains to Scotland. Southward trains run to London, Bristol, Liverpool, etc. The recently completed and comprehensive signal cabin, much like the vast one at York, controls perhaps 800 or more train and engine movements a day along some 10 miles of track, including the bridges and surrounding maze of tracks. In this there are 641 route switches, hundreds of colour light signals and 260 track circuits in the electric interlocking installation.

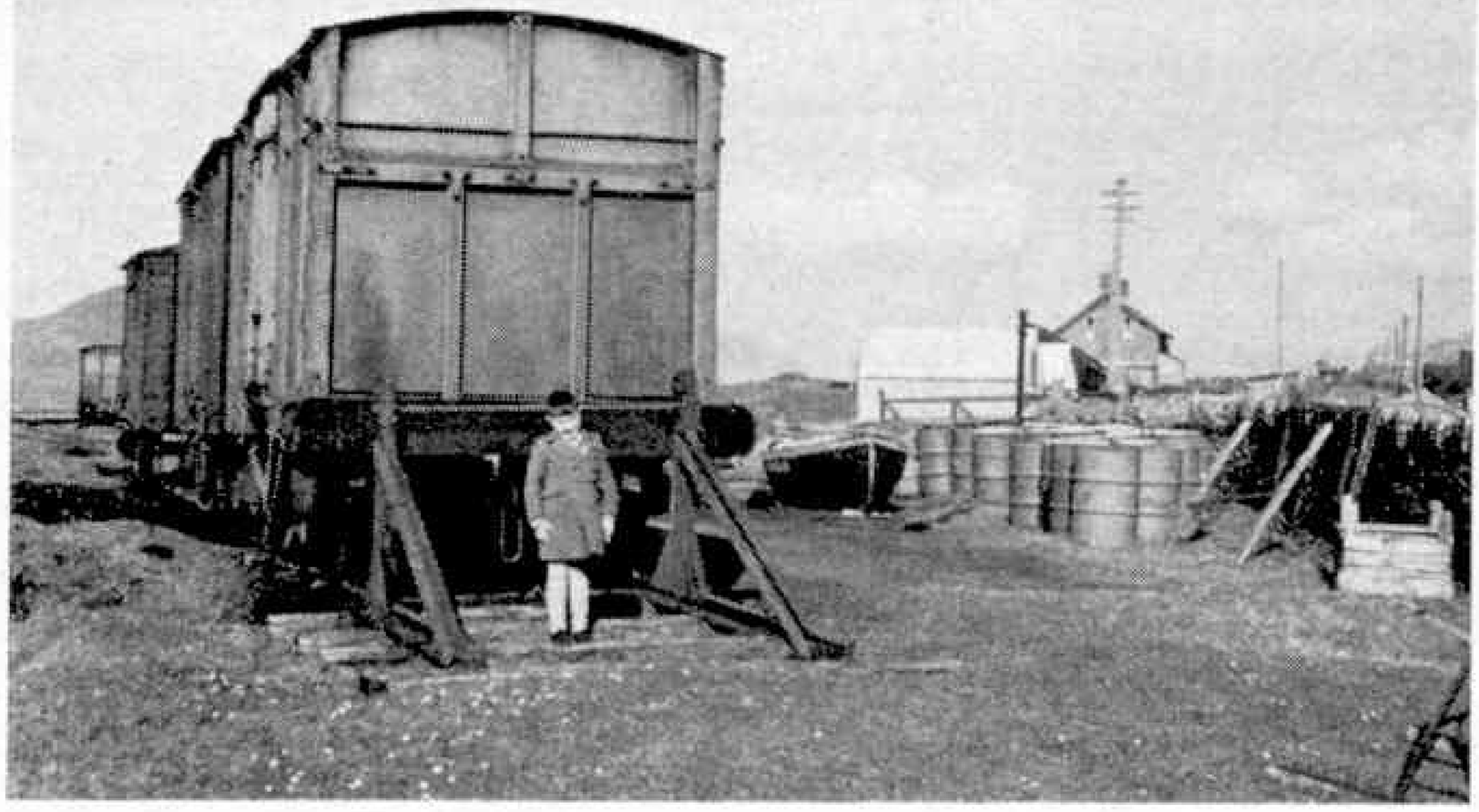
More Progress Reports

At Plymouth the sole principal passenger station, no longer styled North Road, on the Penzance main line and catering also for Southern trains, has been largely rebuilt. Long range control of signalling, points and traffic working is being effected from an extremely modern signal box, with an extension of electric track circuits westward to the Royal Albert Bridge, Saltash. There are new yards and sidings; central goods depot at Friary, the ex-S.R. Terminus, and diesel maintenance sheds in hand at Laira.



L.M.R. 2-8-0 No. 53802 lends a hand in working summer passenger traffic on the Somerset and Dorset route between Bournemouth and Bath. Photograph by R. E. Toop.

MECCANO MAGAZINE
Junior Section



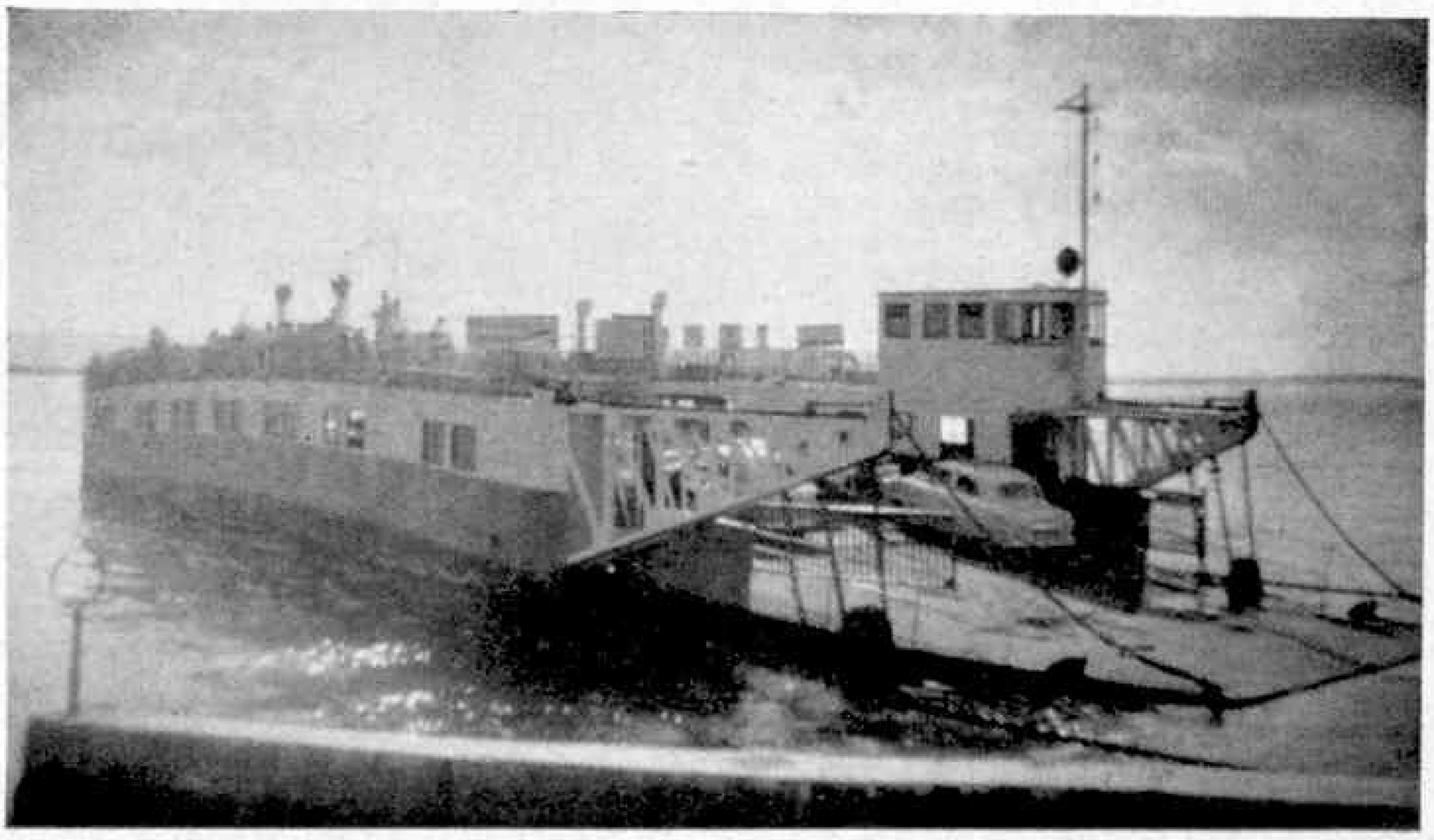
End of the Line

The upper photograph on this page was taken and sent to me by David Roberts, of Carrigaline, County Cork. It shows his younger brother standing in front of a buffer stop that was very interesting to him, as indeed it is to other railway enthusiasts, for at that point his brother was standing at the very end of the most westerly railway line in Europe.

The place seen in the picture is Valentia Harbour, in the South West of Ireland, at a point on the mainland where Valentia Island is separated from it by a strait only about half a mile in length. The railway station is roughly 10 deg. 24 min. West of Greenwich, and no other part of Europe, not even the west coasts of Spain and Portugal, extends beyond 10 deg. W. The gauge of the railway ending there is 5 ft. 3 in., the standard gauge of Irish railways.

The unusual vessel seen in the lower picture on this page is the diesel-electric ferry at Sandbanks, Dorset, a few miles west of Bournemouth, the well-known holiday resort. The ferry is only in service during the summer months, as a small steam ferry meets all requirements during the rest of the year.

The diesel-electric ferry was built in a local shipyard and can carry up to 32 cars and cyclists. In peak hours it accommodates nearly 200 passengers on some of its trips. The photograph, and these details, came from D. W. F. Cull, Bournemouth.



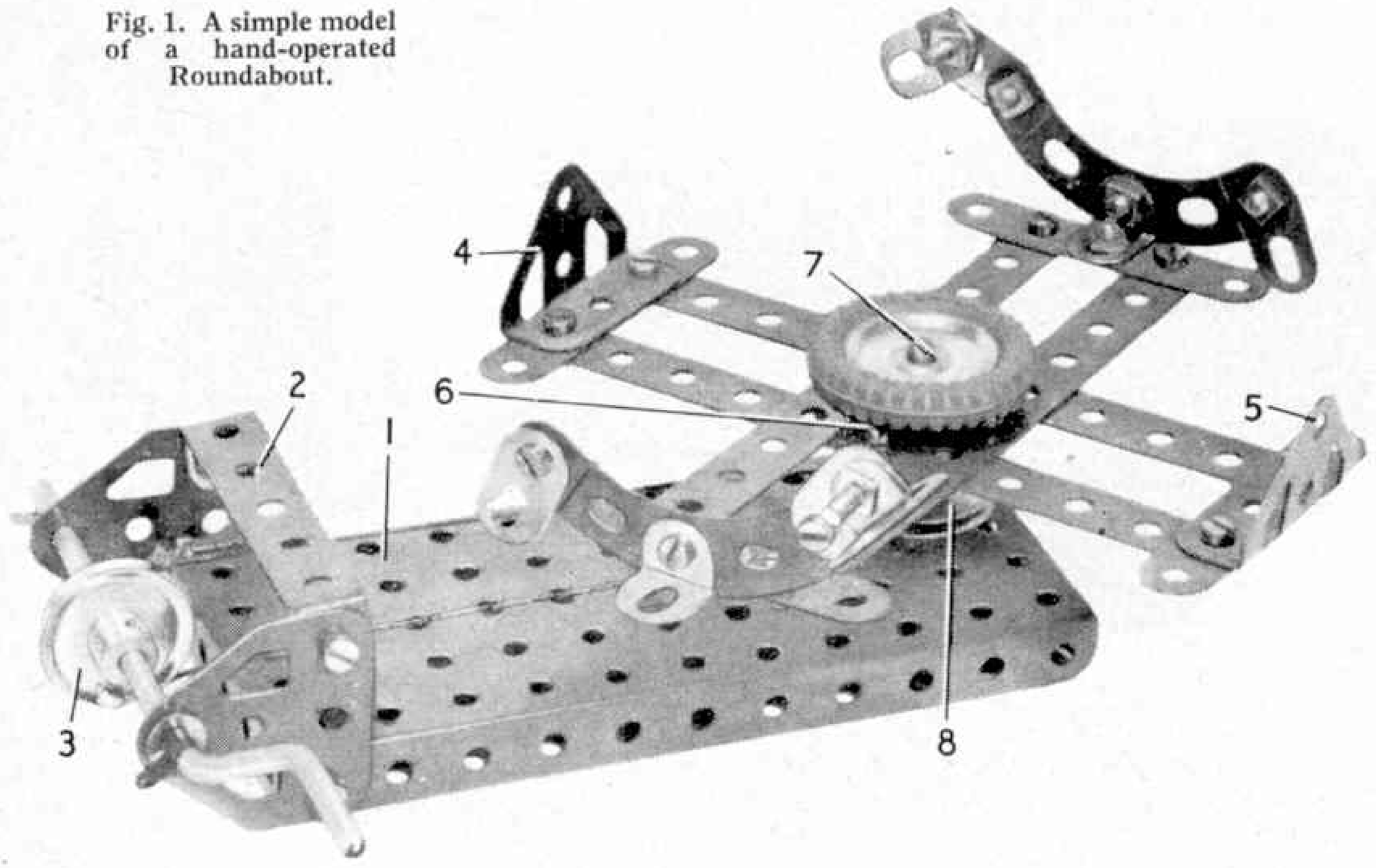


Fig. 1. A simple model of a hand-operated Roundabout.

Easy Model-Building

Spanner's Special Section for Juniors

Roundabout — Market Gardeners' Truck

THE base of the model Roundabout, shown in Fig. 1 consists of a $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate 1 to one end of which two Flat Trunnions are bolted as shown. The Flat Trunnions are joined together by a $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip 2. A Crank Handle carrying a 1" Pulley 3 is journalled in the end holes of the Trunnions.

The roundabout structure consists of four $5\frac{1}{2}''$ Strips arranged in pairs with $2\frac{1}{2}''$ Strips bolted across their ends. Trunnions 4 and 5 are fixed to the ends of one pair of Strips and two "animals" each consisting of a $2\frac{1}{2}''$ Stepped Curved Strip, three Angle Brackets and two Fishplates, are fixed by Angle Brackets at the ends of the other pair of $5\frac{1}{2}''$ Strips.

The four $5\frac{1}{2}''$ Strips are each bolted at their centre holes to a Bush Wheel and one of the bolts holding the Bush Wheel is marked 6 in the illustration. A 2" Rod 7 journalled in the centre hole of the second row of the Flanged Plate is held by a Spring Clip underneath the Plate. Washers are now placed on the Rod between a 1" Pulley and the Flanged Plate. Now the roundabout is fixed to the Rod, and finally a 1" Pulley fitted with a Tyre is located above the Bush Wheel on the Rod.

A belt of Cord passed round Pulleys 3 and 8 drives the roundabout around when the Crank Handle is turned.

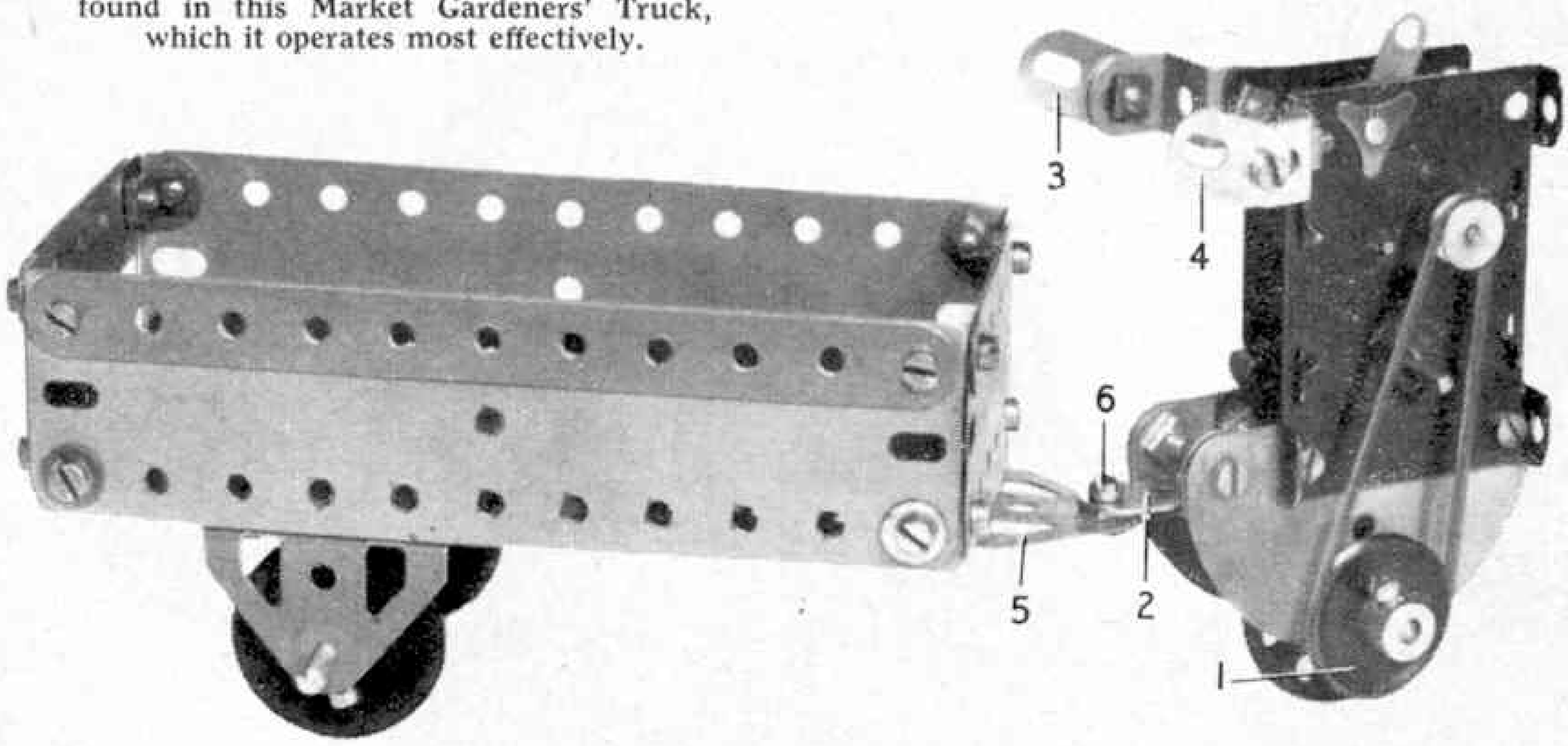
A list of the parts required to build the Roundabout is given at the end of this article.

The motor-driven Truck that is shown in Figs. 2 and 3 is based on a type of vehicle used by many market gardeners for transporting all kinds of garden and farm produce. It can however, be used for other goods if desired. The model is built from parts in Outfit No. 3.

The engine unit is a *Magic* Motor, which is bolted to two Semi-Circular Plates. A Bush Wheel forms the front road wheel and it is mounted on a $1\frac{1}{2}''$ Rod that is passed through holes in the Semi-Circular Plates and carries also a 1" Pulley 1.

A Fishplate 2 is bolted to two Angle Brackets attached to the Semi-Circular

Fig. 2. A good use for a "Magic" Motor is found in this Market Gardeners' Truck, which it operates most effectively.



Plates at the rear as shown. The engine unit is steered from two handles, consisting of a Reversed Angle Bracket and an Angle Bracket respectively, to each of which Fishplates 3 and 4 are bolted.

The Truck body is made up from a $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate for the base and the sides are two $5\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plates edged with $5\frac{1}{2}''$ Strips. The ends are $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plates and each is edged by a $2\frac{1}{2}''$ Strip.

The wheels are 1" Pulleys with Rubber Rings and are mounted on a $3\frac{1}{2}''$ Rod passed through the apex holes of two Trunnions bolted to the Flanged Plate. A Flat Trunnion 5 is bolted to the underside of the Flanged Plate at the front. This forms a means of attaching the Truck to the engine unit. A bolt 6 is passed through the Fishplate 2, fitted with a nut and then passed through the apex hole of the Flat Trunnion 5, when it is fitted with a second nut. The two nuts are then tightened against the Flat Trunnion. If this is done correctly it will be found that the engine unit is then free to move in relation to the Truck so that the vehicle can be steered.

Parts required to build the Market Gardeners' Truck: 2 of No. 2; 2 of No. 5; 3 of No. 10; 1 of No. 11; 5 of No. 12; 1 of No. 16; 1 of No. 18a; 3 of No. 22; 1 of No. 24; 1 of No. 35; 34 of No 37a; 34 of No. 37b; 4 of No. 38; 1 of No. 52; 1 of No. 125; 2 of No. 126; 1 of No. 126a; 2 of No. 155; 1 of No. 186a; 2 of No. 188; 2 of No. 189; 2 of No. 214; 1 *Magic* Clockwork Motor.

Parts required to build the Roundabout: 4 of No. 2; 4 of No. 5; 4 of No. 10; 8 of No. 12; 1 of No. 17; 1 of No. 19s; 3 of No. 22; 1 of No. 24; 3 of No. 35; 26 of No. 37a; 22 of No. 37b; 6 of No. 38; 1 of No. 40; 1 of No. 48a; 1 of No. 52; 2 of No. 90a; 4 of No. 111c; 2 of No. 126; 2 of No. 126a; 1 of No. 142c.

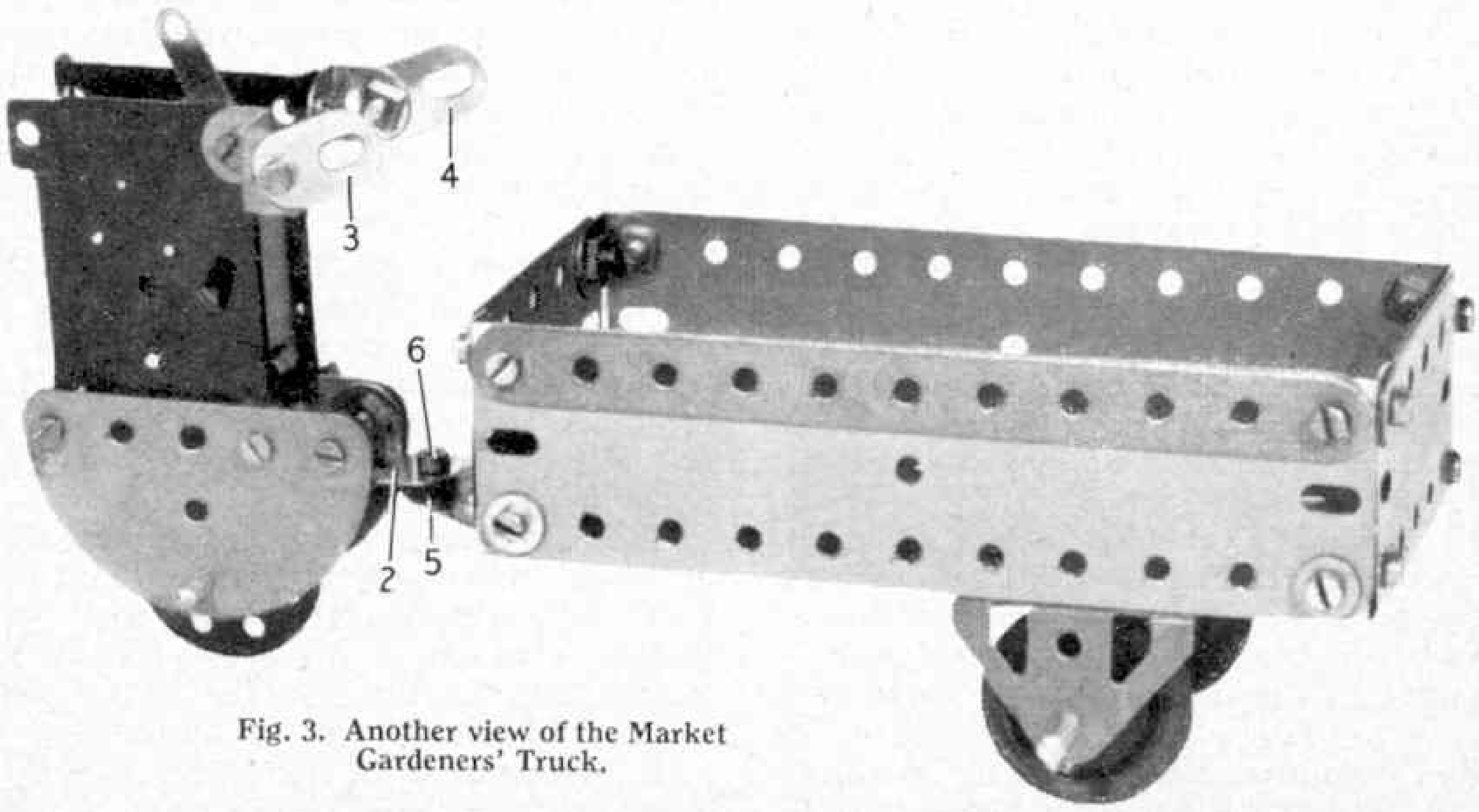


Fig. 3. Another view of the Market Gardeners' Truck.

DINKY TOYS NEWS

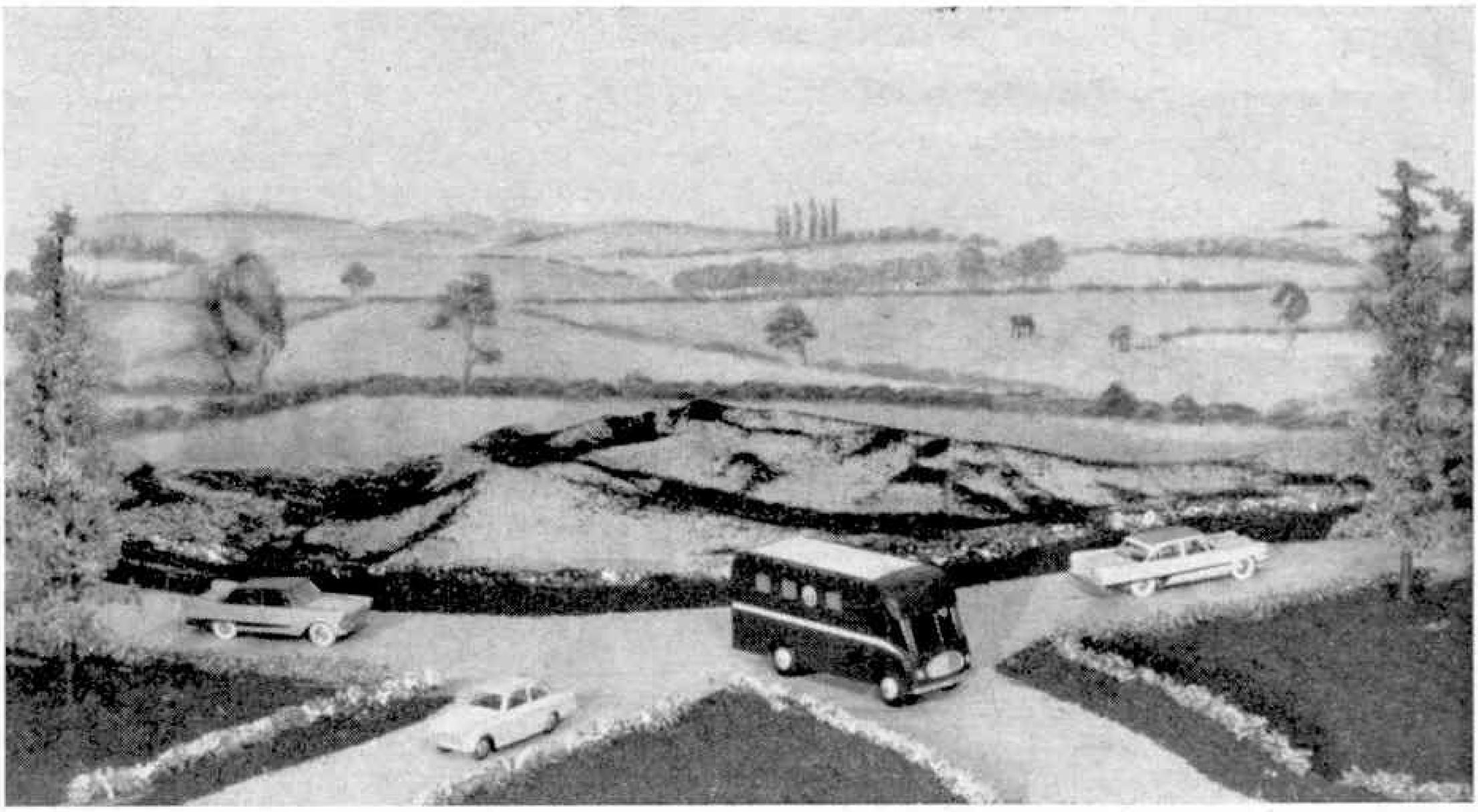
By **THE TOYMAN**

I EXPECT that for most Dinky Toys collectors, particularly those living in this country, the most exciting prospect at the moment is the imminence of summer holidays. Many will be looking forward to visits to the seaside or the country, while others will be planning trips abroad and will be eagerly anticipating all the adventures and pleasures such journeys generally provide. I wish you all the best of luck wherever your holiday journeyings may take you—may the weather be kind to you and may all the joys you anticipate be yours.

In spite of all the joys ahead, however, I am sure that Dinky Toys collectors will be as keen as ever to learn the latest news about their hobby, and I am confident they will be delighted to hear of the two fine additions to the Dinky Toys and Dinky Supertoys ranges that will make their appearance this month. A model of the famous Humber Hawk Saloon is the latest item in the Dinky Toys range, and the new Dinky Supertoy is an eagerly awaited miniature of the B.B.C. TV Mobile Control Room, a companion vehicle to the Roving Eye Vehicle introduced last May. The Humber Hawk appears under the Dinky Toys number **165** and the Mobile Control Room is listed as Dinky Supertoys No. **967**.

As the illustrations of these additions included in these pages will show, every effort has been made in the production of the models to ensure that in external appearance and details they follow their prototypes as closely as possible. The pictures in colour on the back cover will demonstrate how attractive and desirable both are.

The graceful aerodynamic design of the Humber Hawk is magnificently and accurately reproduced in the Dinky Toys model. The real car itself is a full six-seater saloon, with ample head and leg room, and combines greatly improved performance with economic fuel consumption. Automatic transmission is available



An attractive country scene in which the new Dinky Supertoy No. 967, B.B.C. TV Mobile Control Room is seen negotiating a busy road junction on its way to an assignment.

Those who have seen the actual B.B.C. TV Mobile Control Room will appreciate the realism of the fine new Dinky Supertoy No. 967, shown in the picture.

as an extra giving all the advantages of two-pedal motoring. Fully wrapped-round screens both front and rear, together with positive steering and powerful brakes, provide added safety. Tail lamp clusters incorporate flashing amber signals, combined stop/tail lamps and reflectors, and an innovation is the right-hand reflector, which on being pulled out reveals the petrol filler. The 4 cyl. o.h.v. engine has a compression ratio of 7·5:1, and develops 78 b.h.p. at 4,400 r.p.m.

The Dinky Toys Humber Hawk is available with black and green bodywork with black roof, or with cream and maroon bodywork and maroon roof. In each case the wheel hubs are spun aluminium and black treaded tyres are fitted.

The new Dinky Toys exclusive independent suspension is a special feature of the model, which also has plastic windows. Altogether this is a fine new piece to add to your collection, and I know from the number of boys who have requested its introduction that it is sure of a big welcome by collectors everywhere.

Like its recently-introduced predecessor, the B.B.C. TV Roving Eye Vehicle, the new Mobile Control Room is finished in dark green with a narrow grey band along its sides and back. The roof is finished in light grey. Along the roof edges of the vehicle the words "B.B.C. Television Service", appear in yellow lettering. It is of course used for outside broadcasting work, and lends itself splendidly to inclusion in layouts representing sports grounds and motor racing circuits. I am sure that you will all make splendid use of it in such scenes and in others that you think of for yourselves.

In my recent correspondence I found a photograph of a layout built by R. G. Beddington, Towcester, Northamptonshire, who had sent it in the hope that I should be able to use it in these pages. Fortunately the print was suitable for reproduction and I have been able to include it on page 348. It is a well-arranged and tidy layout and every model is neatly placed where it shows up to best advantage in the complete scene. In the background can be seen part of Beddington's Hornby-Dublo equipment and this in conjunction with the Dinky Toys gives an atmosphere of reality to the whole layout.

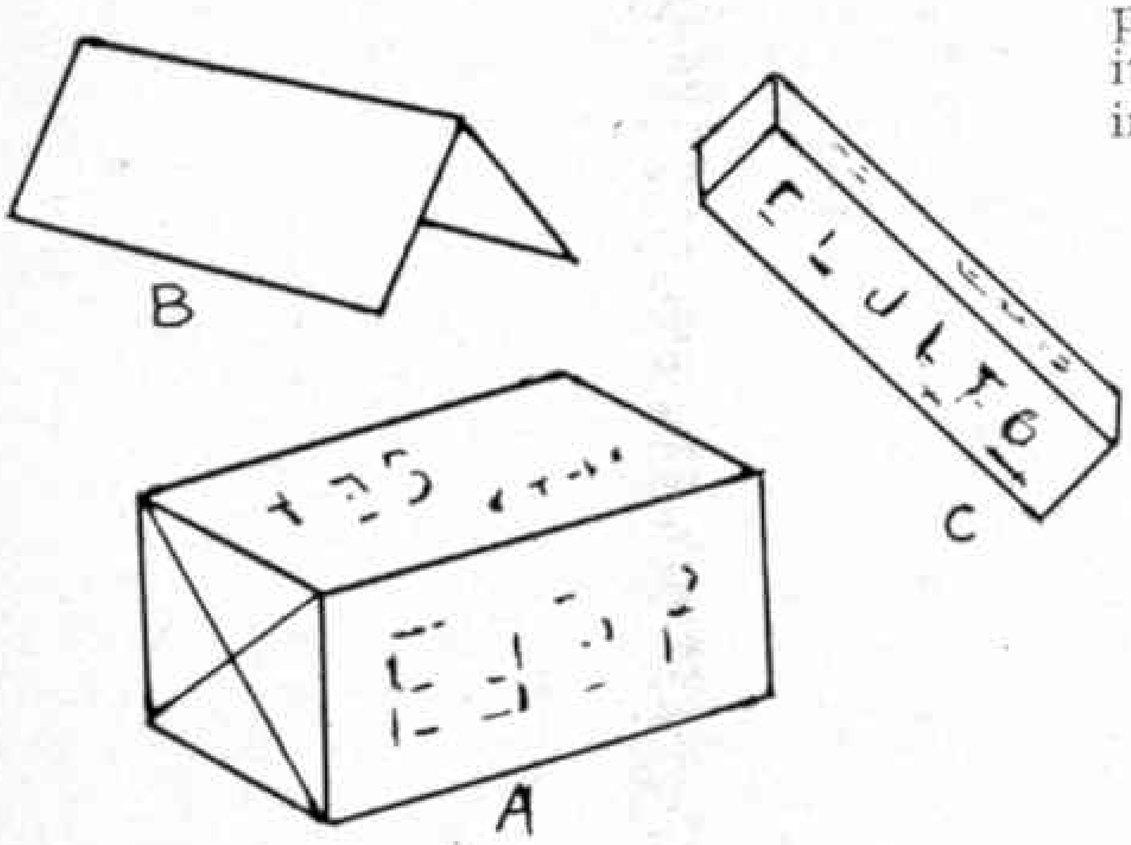
Beddington is a great admirer of Dinky Toys and, as will be seen from the picture, he tries to keep his collection as up to date as possible although he is away at school for most of the year. A good feature of his layout is that it is arranged on a table and can be cleared easily and re-arranged as desired.

The new Dinky Toys Humber Hawk faithfully reproduces the charming lines and general appearance of its famous prototype.

Here the new Humber Hawk is seen in the centre of a typical countryside setting. Coming down the drive from the house on the left is the recently introduced Triumph Herald.

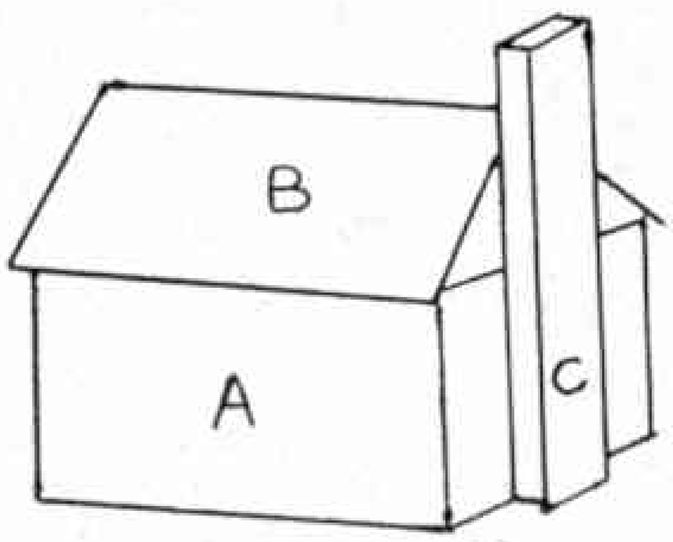
Many young collectors ask me to tell them how to make small buildings for use in their Dinky Toys layouts. There are many ways in which these can be made up according to the ability of the builder, but the scheme I am mentioning here is one of the most simple and is particularly suitable for very young boys and girls who may not be able to manage some of the other and more elaborate methods.

First collect any old empty cardboard boxes you can lay your hands on. Packages such as those in which cereals and other foodstuffs come are just the thing, while tooth-paste cartons and match-boxes will prove very handy also. In fact small containers of any shape can be put to really good use in the making of quite effective buildings, and no artistic skill is required.



These sketches show how easy it is to make a simple model house from two empty cartons and a piece of cardboard.

Suppose, for example, that you want to make a house. First select an oblong carton—one about 7 in. by 5 in. by 3 in. is just the thing, but these measurements are not critical and quite wide variations can be allowed. Now look at the drawing on this page. A box A, of suitable size, placed on its side will form the main structure of the house. Now get a piece of fairly stout cardboard B and bend this at right angles down its centre. When glued to the top of the box this will form a good roof. Take a longish carton C—those tooth-paste cartons are just the thing—and glue it vertically to one end of the box, as shown in the sketch, to form the chimney. If you have a box of paints you can now paint the walls in white or greyish colour and the roof in blue or red, leaving spaces for windows and doors. The main structure of your house is now complete. The windows and doors can be painted in appropriate colours after the walls are dry.



Keep your eyes open for all the empty cardboard boxes you can find. Bits of coloured paper and silver paper are also very useful, as they can be used instead of paint for representing windows, doorways and other external features of your buildings.

A Great New Year for Dinky Toys Licence Holders

Have you got your Dinky Toys Collector's Licence for 1959-60 yet? The First of July is one of the most important of dates for every Dinky Toys owner, for it sees the beginning of a new year for the many thousands of holders of their treasured possession. Throughout the month of June applications for renewal of existing Licences came along in their thousands, and there were also an immense number of requests for the new Licences from Dinky Toys enthusiasts who have realised their value.

This year the Licences are better and more useful than ever. They give the names and numbers of existing Dinky Toys and Supertoys, all classified in groups so that you can quickly turn for instance to the sections in which racing cars, motor lorries, or any other types of Dinky Toys are listed. The number of pages too has been increased so that more information can be given, particularly on Dinky Toys motor cars and lorries.

A fine array of Dinky Toys and Supertoys with a purpose is shown in the picture at the head of the page. In the background of the layout, which was built by Dinky Toys Club member R. G. Beddington, Towcester, is the terminus of the owner's Hornby-Dublo railway, and he makes splendid direct use of many of his Dinky Toys in association with his model railway activities.

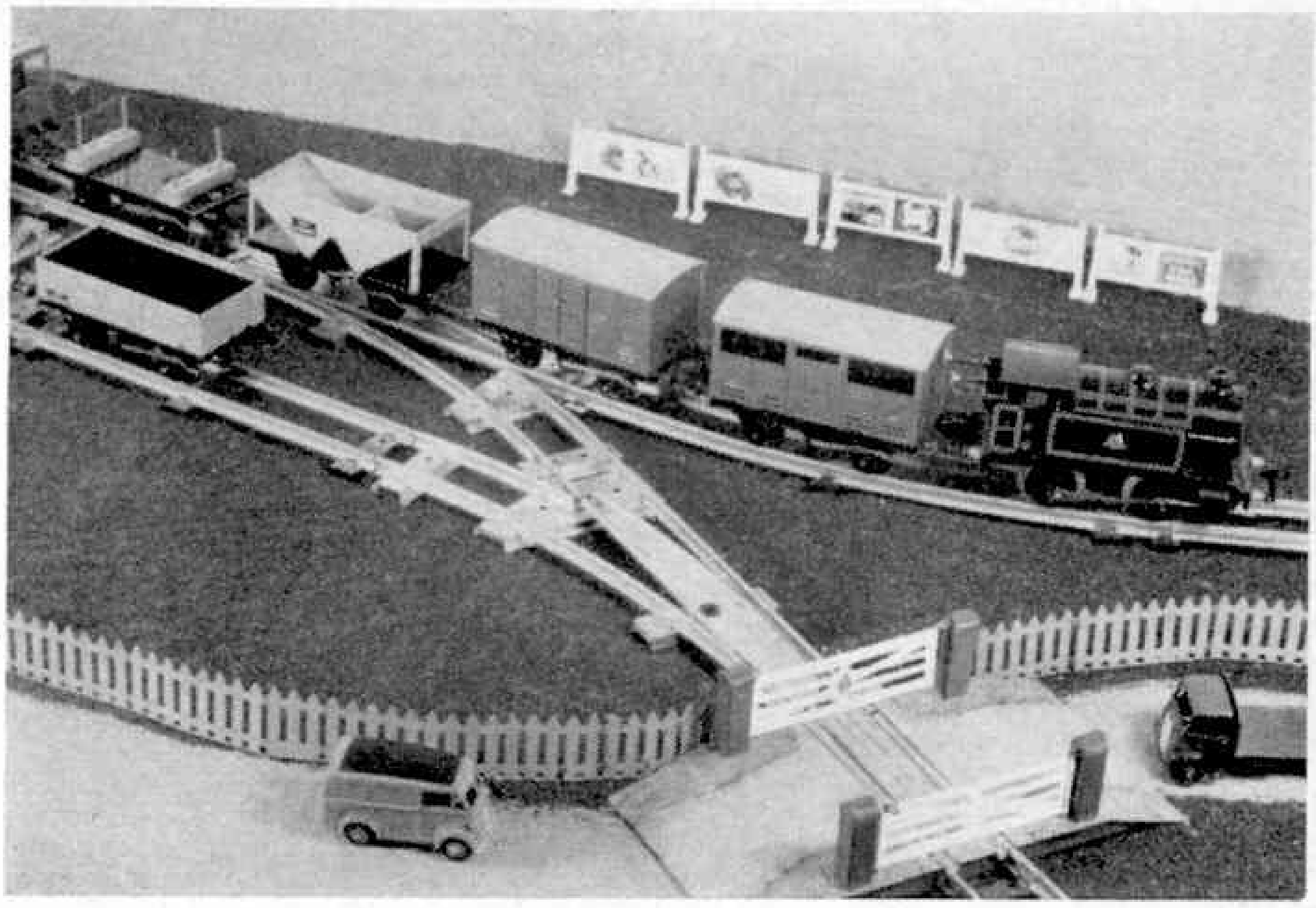
The new Licences will be current for the year beginning on 1st July 1959 and ending on 30th June 1960. Do not forget to transfer to your 1959-60 Collector's Licence the details of the Dinky Toys and Supertoys that you already possess, with other information that you have entered in your old Licence. There will be room for you to record the new Dinky Toys and Supertoys appearing monthly during the year so that you can keep your lists up to date without difficulty. Don't forget that pictures in colour of the new issues, with many details, appear on the cover of the *Meccano Magazine* every month, and you can see the new Toys and Supertoys at your dealers.

And now here is another exciting piece of news. As you know, every month throughout the greater part of the Licence year now ended Stirling Moss chose a Dinky Toys Collector's Licence number from those that had already been issued, and the holder, together with his parents, and on some occasions his brothers and sisters, was invited to spend a happy day at our Works. It has now been decided that instead of picking out *one* Dinky Toys Collector's Licence number monthly, as many as *ten* will be chosen, and Dinky Toys of the holder's own choice up to the value of £2 0s. 0d. will be awarded to each of them.

This will be done every month until further notice, so make sure that you have an opportunity of winning one of these fine prizes by writing at once to The Secretary, The Dinky Toys Club, Binns Road, Liverpool 13, for a Licence if you have not already got one.

And, before I forget, let me tell you that the Dinky Newsletter you received along with your Dinky Toys Collector's Licence for the year 1959-60 is the first issue of a new publication that you will receive *free* at intervals. It will come to you automatically if you are a Licence holder.

Just another thought—take care of your Licence and keep it tidy! Your Dinky Toys Newsletter will have told you why.



An attractive Level Crossing scene on a Hornby Gauge 0 railway.

"Tommy Dodd" writes about:

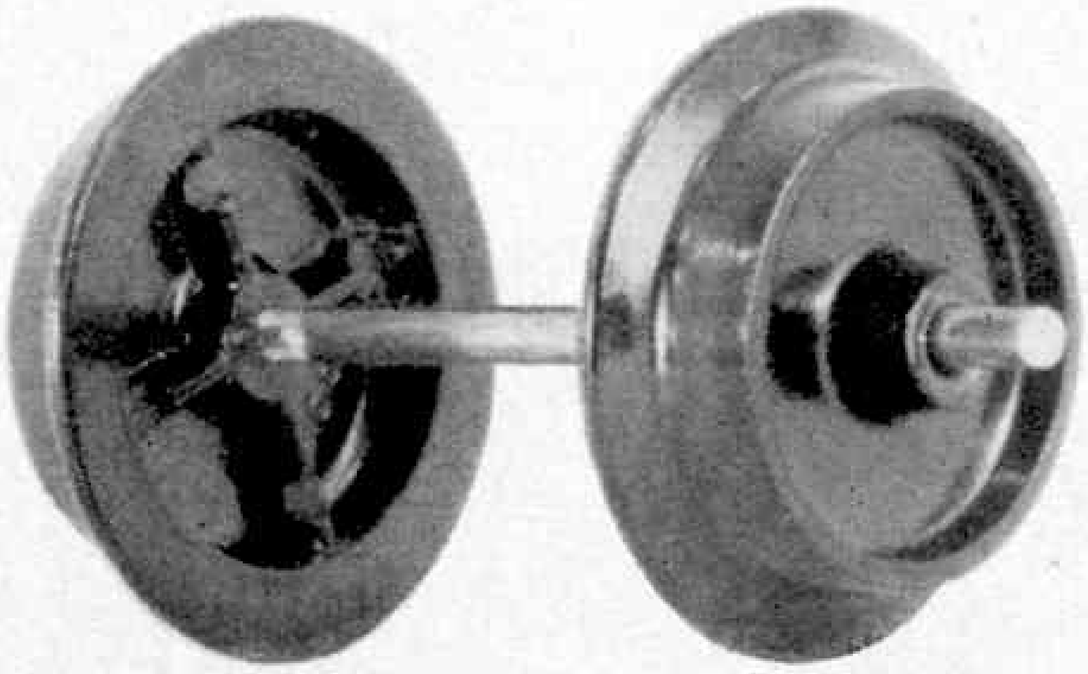
Wheels, and Other Things

I AM afraid that many of us do not often stop to think how important are the wheels on which our Hornby Trains run. Wheels, like rails, are rather apt to be taken for granted, but they are an essential part of any railway system. You read in last month's *M.M.* how London Transport looks after the wheels of its railway rolling stock, the hard worked electrics on which so many travellers in the London area make their daily journeys. It is equally interesting to look at the best ways of taking care of Hornby Gauge 0 wheels.

At one time miniature railway wheels were invariably all metal, either pressed or cast to the forms required. In more recent times advantage has been taken of the possibilities of moulding and the wheels that have been standard for Hornby Gauge 0 rolling stock for some time have been made of plastic. The material used is hard, strong and smooth, qualities that make it ideal for miniature railway wheels, and Hornby wheels mounted on their standard axles certainly revolve easily and truly.

These moulded wheels are quiet in motion, too, and vehicles fitted with them can spin along in almost uncanny silence. So there we have what we may regard as the perfect wheel for Hornby Coaches and Wagons, needing the minimum of lubrication and just a certain amount of cleaning from time to time. Look after the wheels of your trains; they are worth the small amount of trouble involved and if they get lost at any time, replacements are listed and can be obtained from your dealer.

The Driving Wheels of Hornby Clockwork Locomotives are of course die-castings, as they have always been. These must be kept clean too and with clean wheels and rails you should have no trouble from your engine slipping. Nor will you have the sluggish running that is sometimes experienced when your trains are brought out after being stored away for a spell, should you happen to have omitted to clean up the wheels and rails before you put them away last time.



A pair of standard wheels and axle, as used on Hornby Gauge 0 Rolling Stock.

Part of the layout of Mr. John Joad, of Littlehampton, which includes many vintage Hornby locomotives and vehicles.

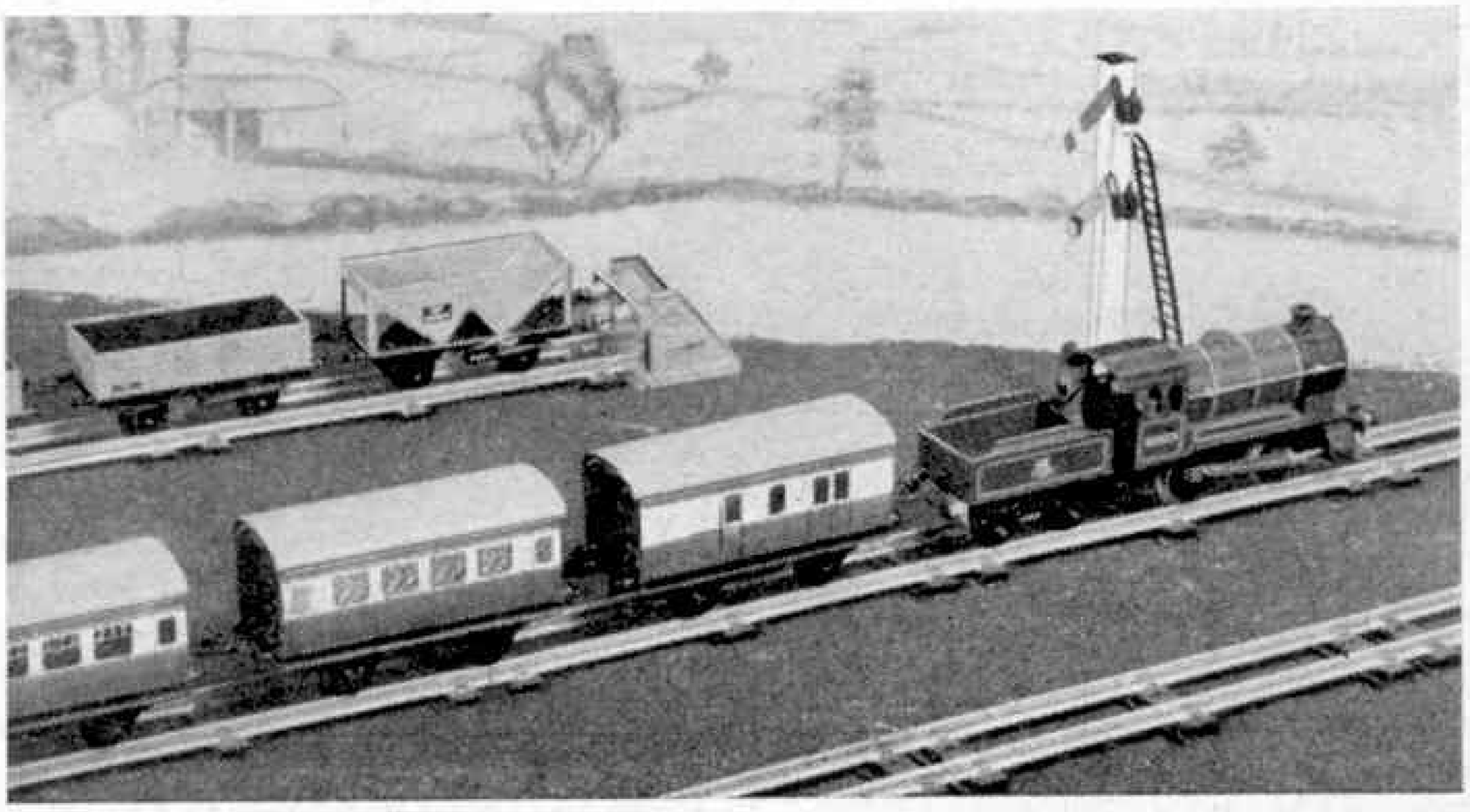
A fine day now may tempt you to put your railway out of doors, following the hints given in previous talks. On the other hand a wet day may decide you to get the railway out for an indoor running session.

I am often asked about the use of the Hornby Level Crossing, which you see in the upper illustration opposite. Many of my questioners wish to avoid the "leading to nowhere" look that a Level Crossing sometimes has. In the picture the Level Crossing is placed on a track branching off from the main running line and the roadway is made to follow a course roughly parallel to that of the railway. This sort of thing often happens in actual practice, particularly in country where there are natural obstacles, such as hilly ground, rivers and so on. Road and rail take the best way past these obstacles.

Things are always much better if you can mark out the road in some way, either by providing some fencing or miniature hedges, or simply by defining the road surface. The latter can be represented very easily by cutting pieces of brown paper or something similar to the required shapes. Such a "road surface" is easily laid, and is just as easily removed when a railway has to be taken up and put away when train running is over.

I find that a great deal of interest is taken nowadays in the older locomotives, rolling stock and other equipment of the Hornby Gauge 0 system. That is why I have included the picture above, showing part of the railway of Mr. John Joad, of Littlehampton, which includes several elderly Hornby Locomotives and pieces of rolling stock.

This formation provides a fair space for the accommodation of the operator and any possible assistants he may have. One has to sit or kneel when working a railway on the floor and it is important to have sufficient foot space here and there when it is necessary to step from place to place, either to set the Points, to wind up locomotives, or to do any of the other things that Hornby clockwork enthusiasts find so enjoyable. This sort of "do-it-yourself" railwaying can be really good fun.



"Line clear ahead" is the message given by the Signal to this Hornby Train, as it makes its way along the main line. The Coaches shown are No. 51 vehicles.

Of General Interest

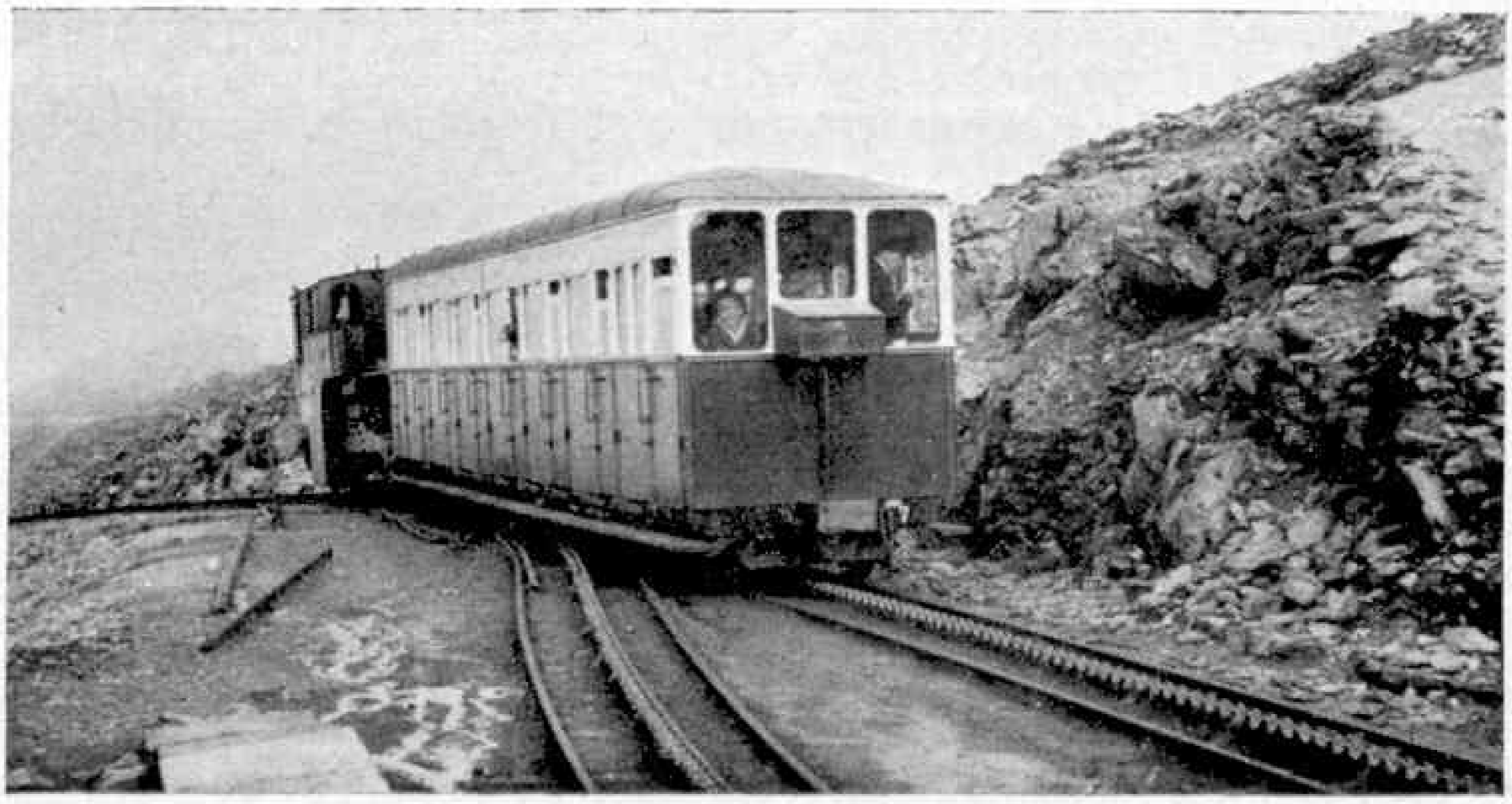
A barge about to pass through the 159-year old canal tunnel under the Pennines, from Marsden to Diggle. Photograph by A. L. Buxton.

THE two pictures on this page illustrate travel underground and at a great height respectively. The upper one shows a barge about to set off on a canal trip under the Pennines, from Marsden to Diggle. Here the Huddersfield Canal runs underground, through a tunnel cut about 1800 that is about three miles long. The canal today is not used for its original purpose, but takes drainage water from the Standedge railway tunnel, on the line between Manchester and Leeds, which runs practically alongside.

The passage must have been an interesting one, but those who made it received one or two surprises when they glided under showers of water draining from the tunnel above! Apart from these, the tunnel seemed dry, but became progressively colder, and many were very pleased when they reached the open air once more.

The occasion of this journey was an exploring expedition carried out by members of the Huddersfield Railway Circle.

The second way of travelling is one that is open to practically anybody, for the railway shown in it is the public one that ascends Snowdon. The climb of the mountain is the reason for the unusual track seen plainly in the picture, for between the running rails is the rack in the teeth of which gear wheels on the locomotive engage.



The highest railway station in Britain is that at the summit of Snowdon, 3,540 ft. above sea level. A train is seen arriving there in this picture, from a photograph by Reece Winstone.

One of the small Levy-Lepen flying boats used by Sabena in 1923 on the Congo network.

Belgian Birthday

By John W. R. Taylor

THIS year marks the 40th anniversary of the start of international airline flying in Europe, and one of the companies whose 40th birthday is being celebrated is SNETA. You will probably not recognise its name, but you will certainly have heard of Sabena, Belgium's great national airline, which took over in 1923 the services which SNETA pioneered. What makes its story of particular interest is that many of its most important services have always been flown not in Europe but in and to some of the wildest parts of Africa.

SNETA (the initials of a name meaning the National Company for the Study of Air Transport) came into being on 1st March, 1919, less than four months after the end of the 1914-18 War. Its first experimental flights were made between Brussels, London, Paris and Amsterdam; but the small group of ex-military pilots and businessmen who founded it were far more interested in using aircraft to open up the vast undeveloped regions of their country's overseas possessions in Africa.

As a result, their first regular air service, started on 1st July, 1920, was over 362 unmapped miles of the Belgian Congo between Leopoldville and N'Gombe. As there were no airfields, they operated the service with tiny single-engined Levy-Lepen flying boats, which proved so successful that within a year the route was extended to Stanleyville, 1,078 miles from Leopoldville.

Meanwhile, back in Europe flying was building up to such a degree that it seemed essential to have a Belgian national airline, and Sabena (Societe Anonyme Belge d'Exploitation de la Navigation Aerienne) was formed to take over SNETA's operations. From the start, one of the main aims of the new company was to forge an air link between Brussels and Leopoldville, but the aircraft of 1923 were hardly suitable for such a service and it had to content itself with spreading its wings nearer home.

Sabena's first official flight, on 23rd May, 1923, was made by a D.H.9, which carried mail and freight from Brussels to Lympne in Kent, via Ostend. In the following year it took delivery of a three-engined Handley

A Douglas DC-3 of Sabena, put into service soon after the end of the second World War.

Page W.8e and in this great air liner, named after Princess Marie-Jose of the Belgians, Edmond Thieffry brought a dream nearer reality by flying for the first time from Belgium to the Congo. He took 51 days to complete the 5,000-mile journey, over France, Spain, Algeria, the Sahara desert, the Niger, Lake Tchad and Oubangui, but he had pointed the way.

Douglas DC-7C of Sabena at Brussels National Airport.

Year by year Sabena extended its network, to London in 1926, Cologne in 1928, Dusseldorf and Hamburg in 1929, Malmo and Copenhagen in 1931, Berlin in 1932 and Lille in 1935. In the Congo in 1926-7 it opened the 1,415-mile Boma-Leopoldville-Elisabethville route, and this became the second side of the Leopoldville-Stanleyville-Elisabethville triangle which is still the basis of the Congo network. Finally, on 23rd February, 1935, came the great day when it opened its first regular service between Brussels and the Congo.

During these years Sabena constantly modernised its fleet with the finest available aircraft. First came the 102 m.p.h. Fokker F.VII, then the 168 m.p.h. Savoia-Marchetti SM-73, the 280 m.p.h. SM-83, the sturdy Junkers Ju 52 and the Douglas DC-3, the famous Dakota which revolutionised airline travel in the late thirties. By 1938 it had 40 aircraft, carrying 34,000 passengers a year over 11,200 miles of routes. Then came the war. For four years Belgium was occupied by the enemy; but Sabena continued to fly overseas and by 1945 it was operating a vast 20,000-mile network of routes in Africa as its contribution to the Allied war effort.

When the fighting was over, it lost no time in getting back to normal business. By 10th July, 1945, the Belgian Congo route was re-opened. By the end of the following year its European routes were more extensive than before the war; and in 1947, following delivery of its first four-engined DC-4s and DC-6s, it began flying over the Atlantic to New York.

A typical scene at the Heliport at Rotterdam.

Since then Sabena has never looked back, and today it carries nearly a million passengers a year in an immense fleet of more than 80 aircraft, to which will soon be added five 600 m.p.h. Boeing 707 jet-liners. Most significant of all perhaps is that it has been operating the world's first and only international helicopter passenger services between Belgium, France, the Netherlands and Germany since 1953, proving that although it is 40 years old Belgian commercial aviation is still young enough to pioneer a new and important form of air travel.

Among the Model-Builders

By "Spanner"

Dog Clutch Used as a Coupling

The most common use of the Dog Clutch (Part No. 144) is to allow a drive to be engaged or disengaged by sliding a shaft bearing one half of the Clutch. In the present arrangement, however, the two parts of the Clutch are constantly engaged.

When a long shaft, such as the 11½" Axle Rod, has to carry several pinions and gear wheels, it is advisable to support it in the middle as well as at the ends, so as to keep all the gears meshing smoothly. It is fairly easy to align the three supports so that the Rod rotates quite freely. In certain kinds of models, however, much longer shafts are required, made up of two or more 11½" Rods joined by Couplings, and in these cases it becomes quite a problem to align all the supporting bearings perfectly. In these circumstances, the use of a Dog Clutch instead of a Coupling for joining the Rods together will be found more satisfactory in ensuring that the shaft runs quite freely. The manner of using the Dog Clutch for this purpose is suggested by Mr. A. B. Partridge, Moulton, Northampton, and is shown in the drawings reproduced in Fig. 1. One of the Rods to be coupled lies short in the male member of the Clutch A (Sketch A), while the other Rod lies long in the female member B. If used the other way about the join will be looser. One of the Rods should be supported close up to the coupling, but the other Rod is better not supported except at its outer end. The complete arrangement for a compound rod carrying several gears and pinions is shown in Sketch B.

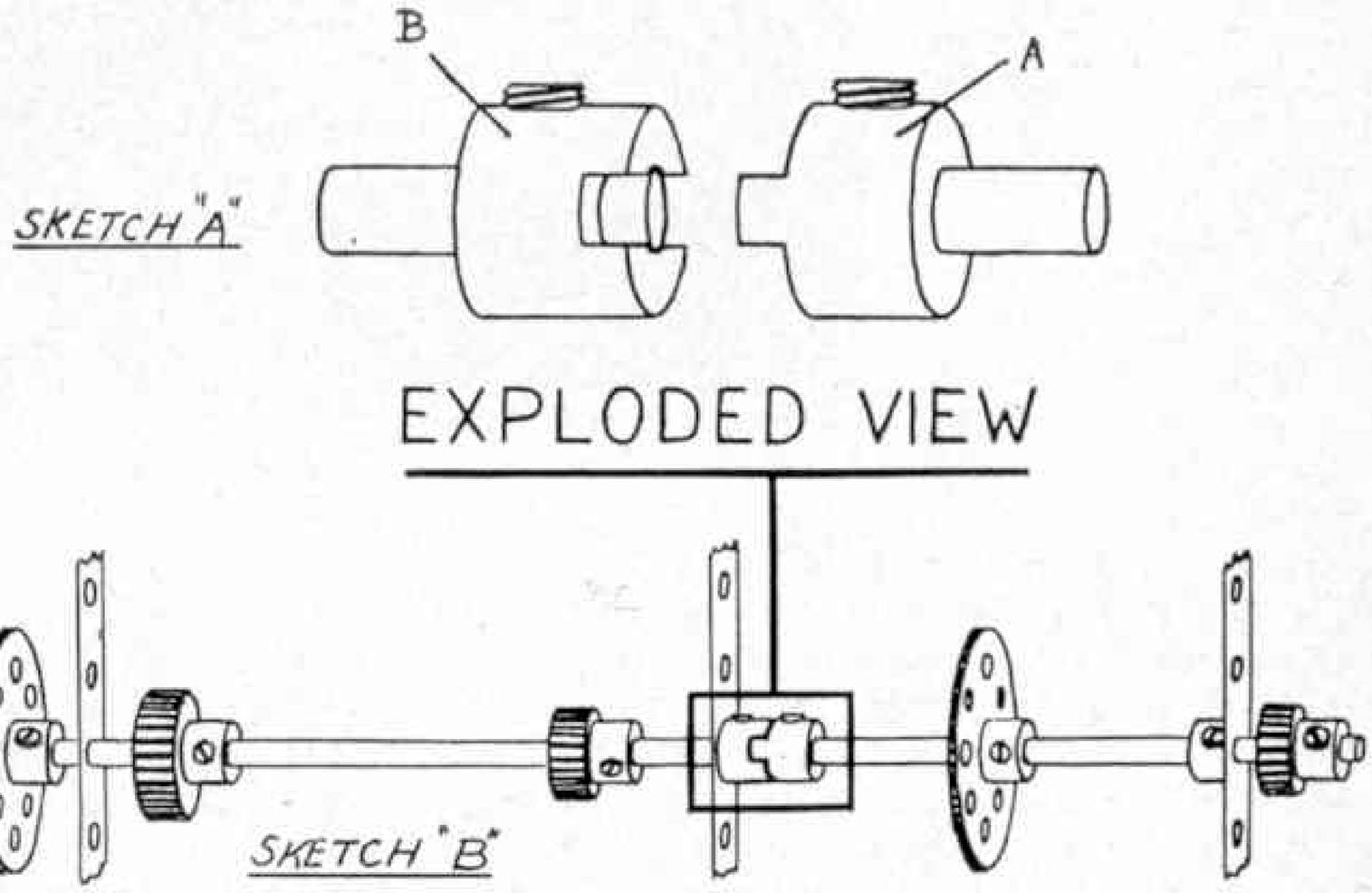
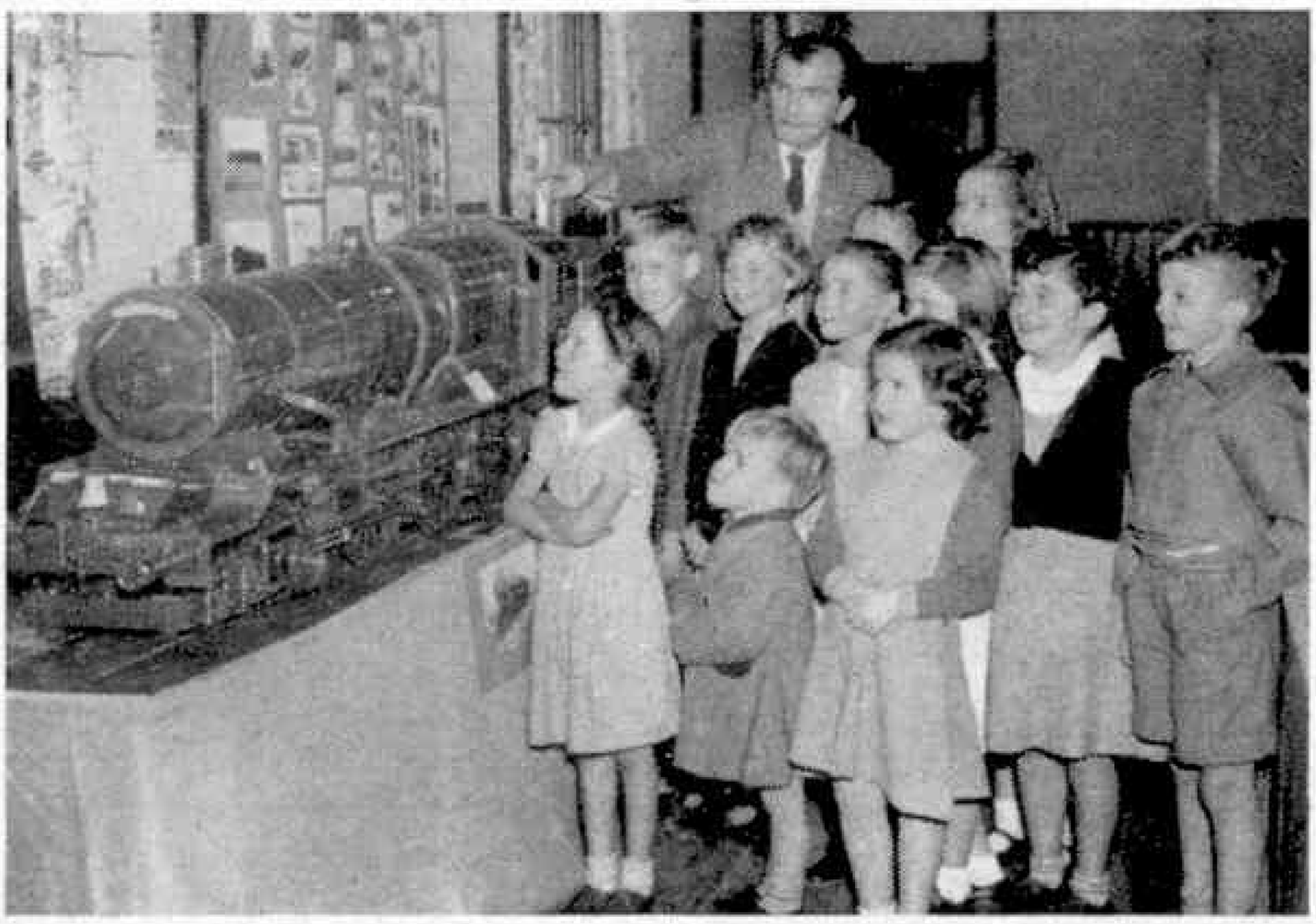


Fig. 1. These sketches show how a Dog Clutch can be used for coupling long rods to ensure free running. The method is suggested by A. B. Partridge, Moulton, Northampton.



A finely finished 10 ft. model of the "King George V" 4-6-0 locomotive, on show at the British Railways Arts and Crafts Exhibition, Newton Abbot, last Autumn. It was built by B. W. Rowe, who is seen in the picture. Photograph by courtesy of the Torquay Times and Devonshire Press Ltd., Torquay.

The Dog Clutch transmits the drive from one Rod to the other and

also provides support for them just like a Coupling, but at the same time it allows just sufficient "play" to enable the built-up rod to run quite freely. Two or more unions made in this way can be used if necessary.

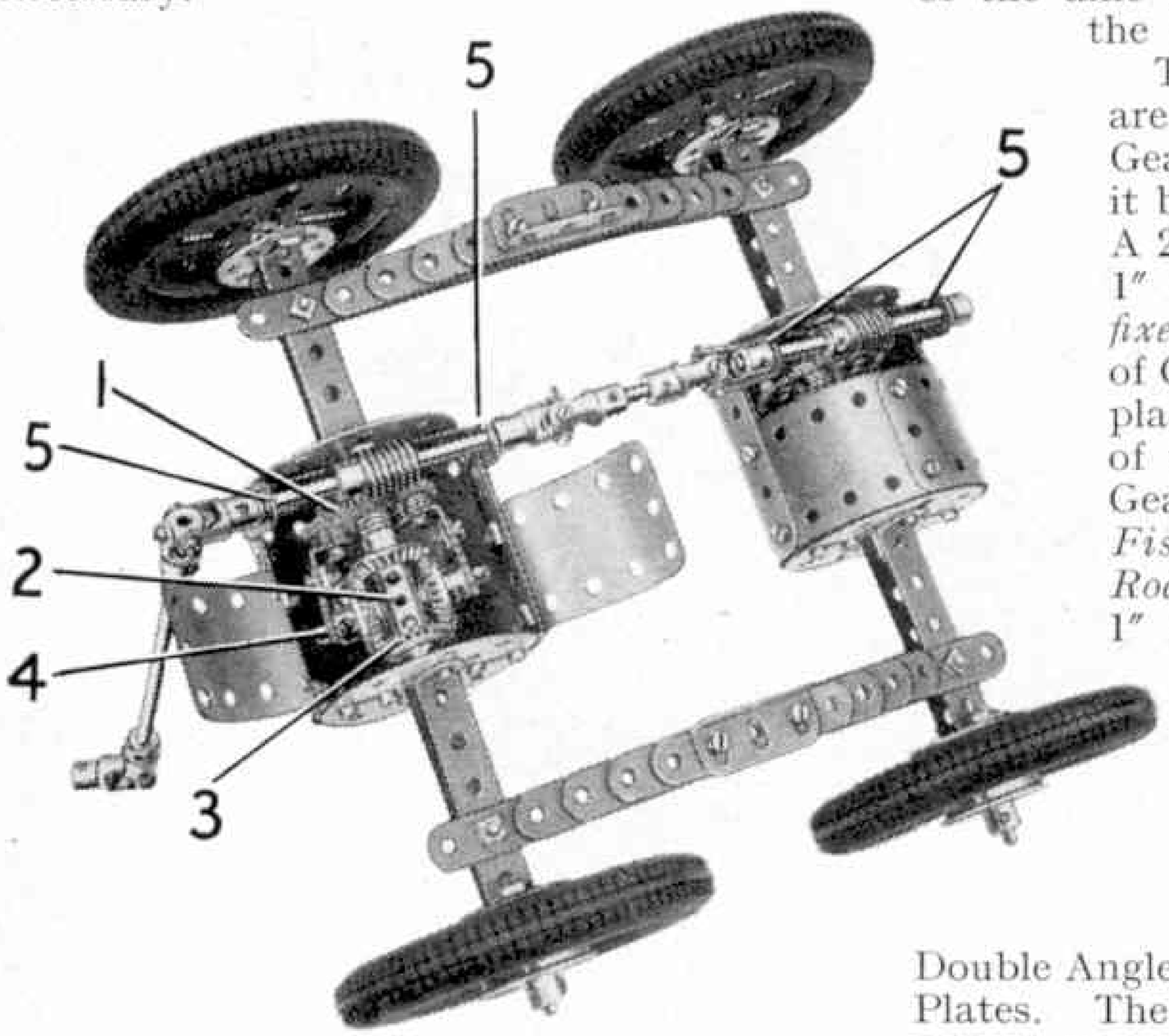


Fig. 2. A twin rear axle drive for model vehicles that will meet many requests for information on a mechanism of this type.

Twin Rear Axle Drive

I have received so many requests recently for details of suitable driving arrangements for model vehicles fitted with twin rear axles, that I think it advisable to describe again a very satisfactory arrangement that I included in the *Meccano Magazine* some years ago. The mechanism is shown in Fig. 2. In this example the twin rear axles are carried by a single leaf spring on each side of the vehicle as shown in Fig. 2. Each spring is made up of one $7\frac{1}{2}''$, two $5\frac{1}{2}''$, one $4\frac{1}{2}''$, two $3\frac{1}{2}''$ and two $2\frac{1}{2}''$ Strips. These are bolted at their centres to a $1\frac{1}{2}''$ Angle Girder, which when used in an actual model can be lock-nutted to the chassis.

Each of the axle units is identical in construction. The axle casing consists of halves, formed by two $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strips bolted between a Face Plate and a Bush Wheel. The halves are joined by two $2\frac{1}{2}'' \times 1''$ Double Angle Strips, and a $4\frac{1}{2}'' \times 2\frac{1}{2}''$ Flexible Plate is curved to shape and bolted in position to form part of the differential casing.

The differential crown wheel is a 57-teeth Gear 1, which is free to turn on a Rod mounted in one half of the axle casing. The Rod projects into a Coupling 2, and a $\frac{7}{8}''$ Bevel Gear is fixed between the Gear 1 and the Coupling. A second Bevel 3 is fixed on a Rod that is mounted in the other half of the axle casing and also projects into the Coupling 2.

Two $1'' \times \frac{1}{2}''$ Angle Brackets are attached by $\frac{3}{8}''$ Bolts to the Gear 1, but they are spaced from it by four Washers on each Bolt. A 2" Rod 4 is passed through the $1'' \times \frac{1}{2}''$ Angle Brackets and is *fixed* in the centre transverse hole of Coupling 2. A $\frac{7}{8}''$ Bevel Gear is placed on the Rod 4 on each side of the Coupling and both these Gears are free to turn on the Rod. *Fishplates are used to centre the Rod in the slotted holes of the* $1'' \times \frac{1}{2}''$ *Angle Brackets.*

The drive to the crown wheel is taken through a Worm fixed on a $3\frac{1}{2}''$ Rod that is mounted in $1\frac{1}{2}''$ Strips 5. These Strips are bolted to the $2\frac{1}{2}'' \times 1''$ Double Angle Strips fixed between the Face Plates. The driving rod of the trailing axle is linked to that of the leading axle by two Universal Couplings and a 1" Rod.

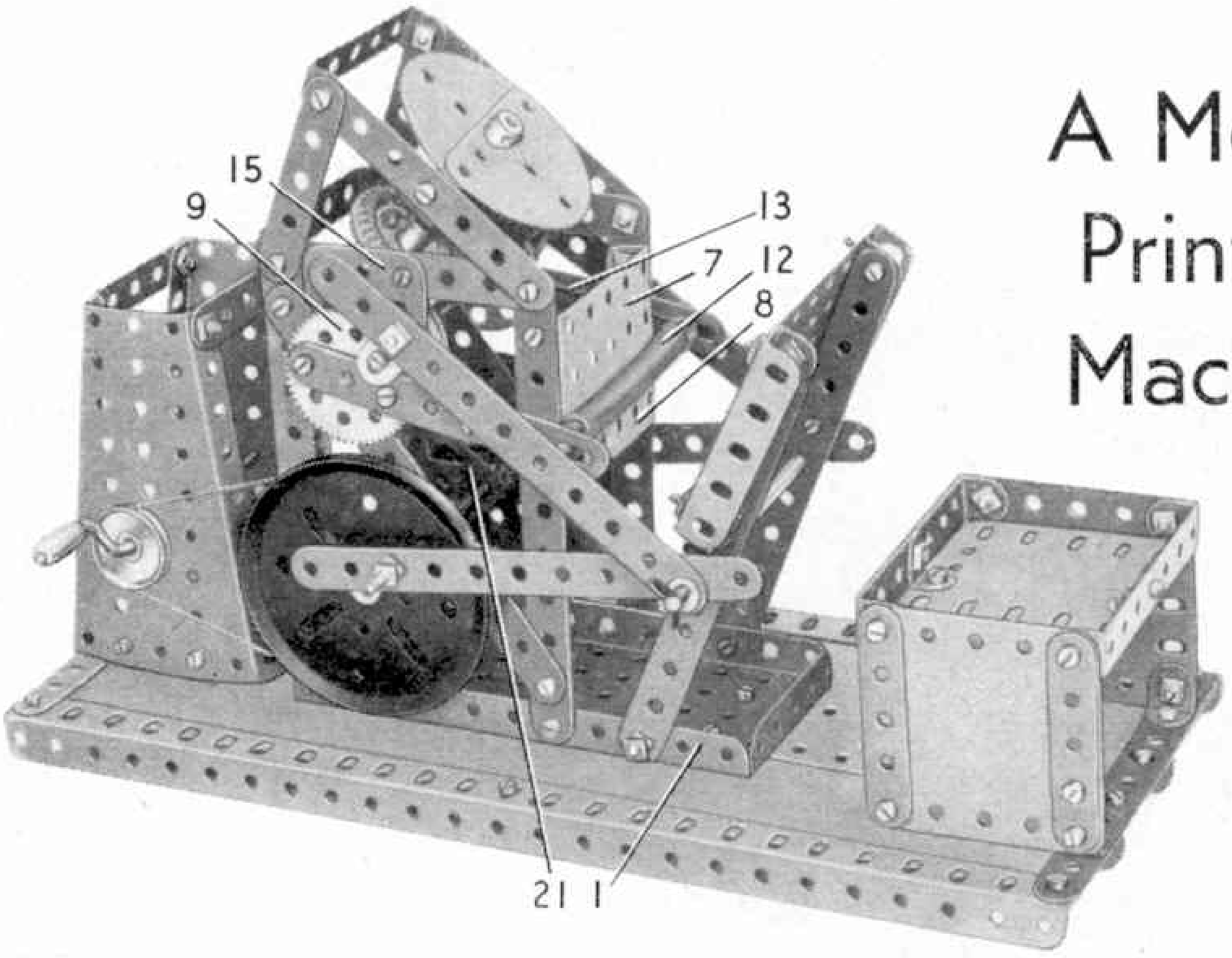
The differential casings are completed by $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plates curved to shape.

Join in the Fun and Win a Prize

Pictures and drawings of most fantastic animals and birds constructed from Meccano parts have been emerging from envelopes and packages reaching me recently! I am doubtful if anything like some of them has ever been seen in nature, and others, although obviously well-known, look far more fierce than any I have seen! The imaginative model-builders who have sent in these entries for the "Birds and Beasts" Competition announced in the May *M.M.* are certainly to be congratulated!

If you have not yet sent in your entry, why not join in the fun now. The closing date for entries is 31st July. There are two sections—A, for model-builders aged 12 and over on 31st July; and B, for those under 12 years of age on this date. Entries should be addressed *Birds and Beasts Contest Meccano Limited, Binns Road, Liverpool 13.*

Each competitor must write his name and full address on the back of each photograph or drawing sent in, with his age on the closing date. All prize-winners will be notified by letter.



A Model Printing Machine

Fig. 1. This mode Printing Machine demonstrates the essential movements of a printer of this type.

THE model Printing Machine shown in Figs. 1, 2 and 3 is so designed that it can be built from parts in Outfit No. 6; and although it is not intended for actual printing it demonstrates the movements and features of a printer of this kind very effectively.

The construction of the base, which should be built first, is commenced by joining two Angle Girders at each end to a $5\frac{1}{2}''$ Strip. Two $12\frac{1}{2}'' \times 2\frac{1}{2}''$ Strip Plates are held by the same bolts and are fixed one on each side of the base. Two Angle Girders are then bolted along the inner edges of the Plates. The resulting gap along the centre of the base is filled in with two $5\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plates and a $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate 1.

Two $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strips seen at 2 are bolted to the base, and to their lugs at each end is bolted a Flanged Sector Plate. The Flanged Sector Plates form the bearings for a Crank Handle on which two 1″ Pulleys 3 and 4 are fixed.

The central framework that supports the mechanism is built next. To each side flange of the Flanged Plate two $5\frac{1}{2}''$ Strips are bolted. The upper portion on each side consists of two $3\frac{1}{2}''$ Strips and a $2\frac{1}{2}''$ Strip arranged as shown. At the top a $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip 5 bridges the structure and a second Double Angle Strip 6 is bolted in the position shown. The type bed is formed by a $2\frac{1}{2}'' \times 1\frac{1}{2}''$ Flanged Plate 7 and a $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip 8, which can be seen in Fig. 2.

The operating mechanisms for the platen and the ink roller are built next and the operating links on each side are similar in construction except that a 57-tooth Gear 9 is used on one side and a Bush Wheel 10 on the other. A $3\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate 11 is connected by Angle Brackets to two $5\frac{1}{2}''$ Strips, which are each lock-nutted at their lower ends to the sides of the $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate 1.

A $2\frac{1}{2}''$ Strip is bolted across the Bush Wheel 10 and is extended by a flattened Formed Slotted Strip. The ink roller 12 is a 4″ Rod to which a piece of rubber tubing is fitted, and it is held in place by two Collars in the slotted holes of the Formed Slotted Strips. The roller is kept in contact with the type and the inking plate by the tension of two elastic bands arranged one on each side of the rubber tubing. One of the elastic bands is marked 13 in Fig. 1 and they are looped around the ends of the inking roller and Rod 14. The Bush Wheel 10 and the 57-tooth Gear 9 are fixed on each end of Rod 14, which is mounted in the apex holes of two Flat Trunnions 15 and 16. A 1″ Pulley fitted with a Rubber Ring is also mounted on the Rod.

The following constructional details are carried out on each side of the machine. A Fishplate is first bolted securely to the

Bush Wheel 10 or 57-tooth Gear 9, as the case may be, and is lock-nutted to a 5½″ Strip 17 or 18 so that the Strip is free to pivot. This Strip is held at its other end on a 5″ Rod that is mounted in the 5½″ Strips carrying the Flanged Plate 11. A second Strip is then lock-nutted freely to a 3″ Pulley 19 or 20 and this Strip also is held by Spring Clips on the 5″ Rod. The 3″ Pulleys are mounted on a 3½″ Rod held in Flat Trunnions, one of which is marked 21, bolted to the rear pair of vertical 5½″ Strips, and is driven by a belt from the 1″ Pulleys 3 and 4 mounted on each end of the Crank Handle. By the action of the levers the Flanged Plate 11 is pulled to and fro so that it makes contact with the type bed when the ink-roller is over the inking plate 22.

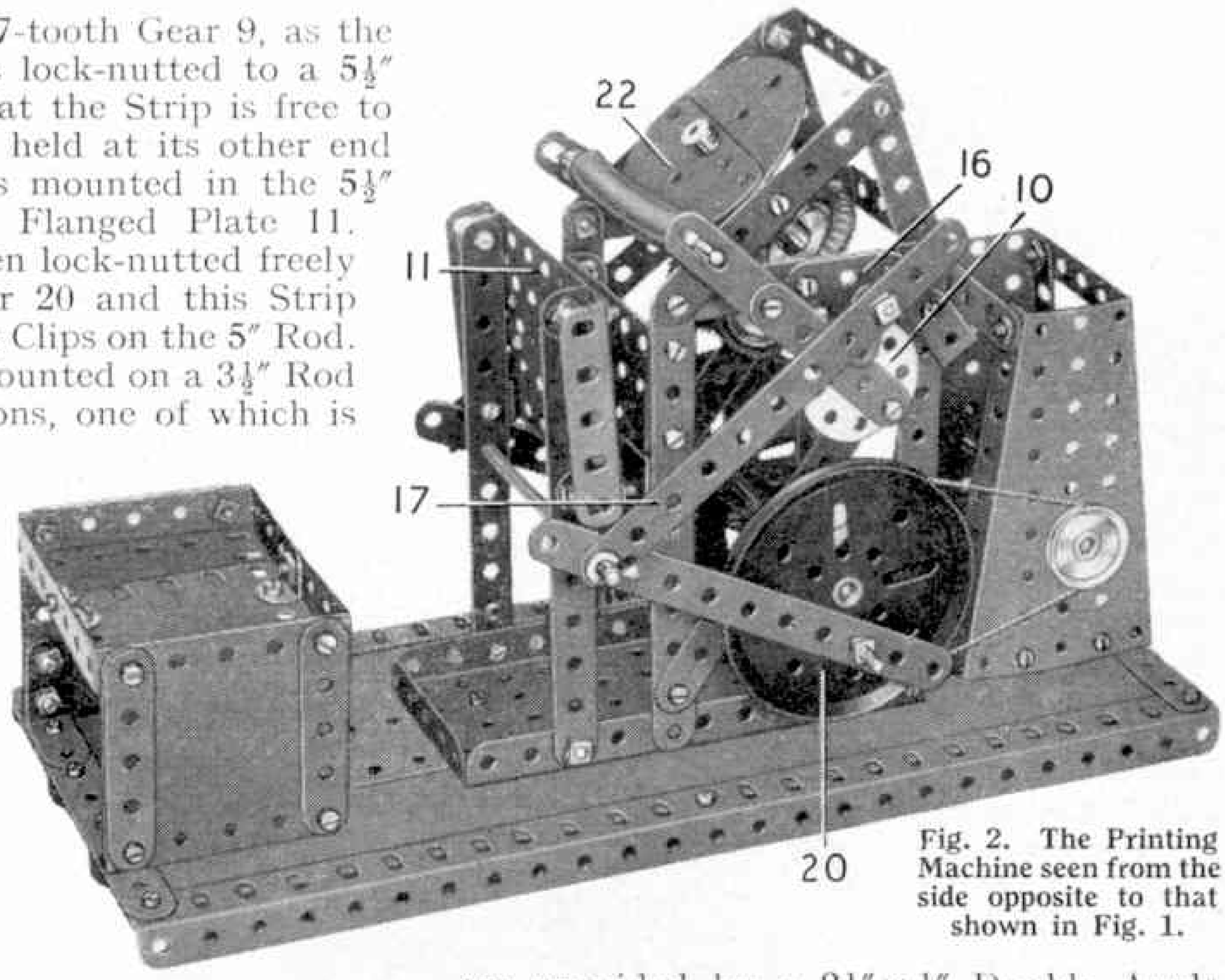


Fig. 2. The Printing Machine seen from the side opposite to that shown in Fig. 1.

The inking plate is held on a 4″ Rod between a Collar and a Rubber Ring fitted on a 1″ Pulley. The bearings for the Rod are provided by a 2½″ × ½″ Double Angle Strip and a Double Bent Strip. A 1″ Pulley 23 is fitted with a Tyre and is mounted on the 4″ Rod. The Tyre engages with the Rubber Ring fitted on the 1″ Pulley on Rod 14, which rotates and drives the inking plate. A pawl and ratchet mechanism is now built up using a ½″ Pinion 24 on the 4″ Rod carrying the inking plate. This Rod is allowed to rotate in one direction only, by the action of an Angle Bracket 25 fixed to a Fishplate that is lock-nutted to one lug of a 1″ × 1″ Angle Bracket. The lug of the Angle Bracket 25 engages the teeth of the Pinion 24. When the Crank Handle is turned the mechanism is actuated as described earlier.

A feeding and receiving table is built as shown and is fixed to the base by a 1″ × 1″ Angle Bracket and a ½″ × ½″ Angle Bracket. The table top is made from two 2½″ × 2½″ Flexible Plates.

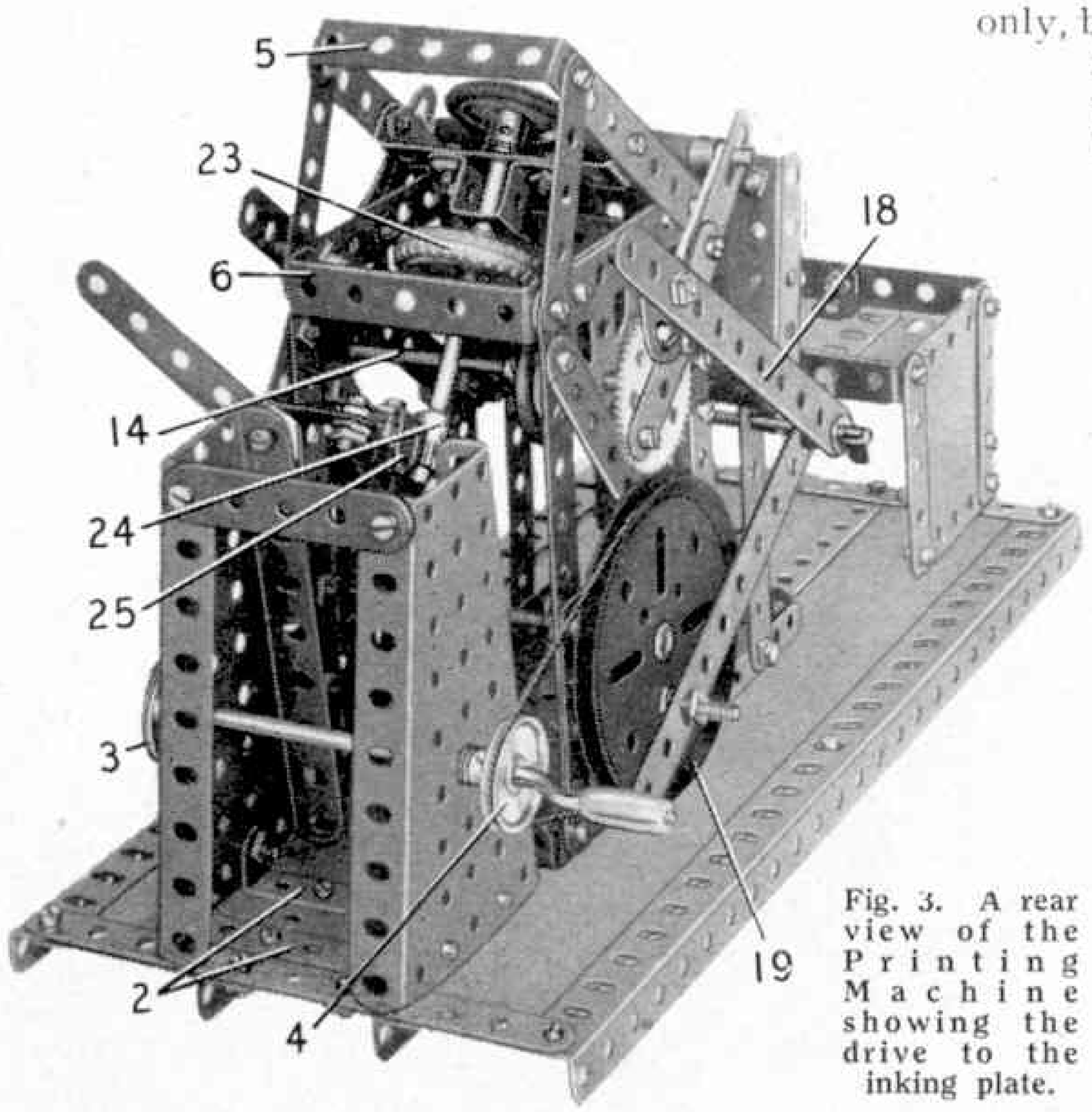


Fig. 3. A rear view of the Printing Machine showing the drive to the inking plate.

Parts required to build the model Printing Machine:—14 of No. 2; 4 of No. 3; 12 of No. 5; 4 of No. 8; 3 of No. 10; 8 of No. 12; 2 of No. 12a; 1 of No. 15; 2 of No. 15b; 2 of No. 16; 2 of No. 19b; 1 of No. 19g; 5 of No. 22; 1 of No. 24; 1 of No. 26; 1 of No. 27a; 8 of No. 35; 108 of No. 37a; 96 of No. 37b; 19 of No. 38; 1 of No. 40; 1 of No. 45; 6 of No. 48a; 2 of No. 48b; 1 of No. 51; 1 of No. 52; 1 of No. 53; 2 of No. 54; 3 of No. 59; 2 of No. 111; 3 of No. 111c; 4 of No. 126a; 1 of No. 142c; 2 of No. 155; 2 of No. 189; 4 of No. 190; 2 of No. 197; 2 of No. 214; 2 of No. 215; 1 piece of rubber tube; 2 elastic bands.

The VertiVeyor Competition

Prize-winning Models

DURING last Winter many model-builders were busily occupied building entries for the attractive Competition in which fine Cash Prizes were offered for the best models of The VertiVeyor, an automatic goods handling plant manufactured by Messrs. J. Collis & Sons Ltd., London. The VertiVeyor is designed to transport goods vertically from one floor of a factory to another, and it operates in conjunction with roller conveyors on each floor which carry the goods to any required point. Loading and discharging of the goods to or from The VertiVeyor is carried out automatically. Full mechanical details of The VertiVeyor appeared in the October, 1958, issue of the *Meccano Magazine* and several pictures of it appeared in the succeeding Winter issues.

The Prizes offered in the Competition were provided jointly by Messrs. J. Collis & Sons Ltd., and Meccano Ltd., who also acted in conjunction in selecting the best entries. All the prize-winners have already received their awards and the allocation of the principal Prizes in each Section of the Competition was as follows:

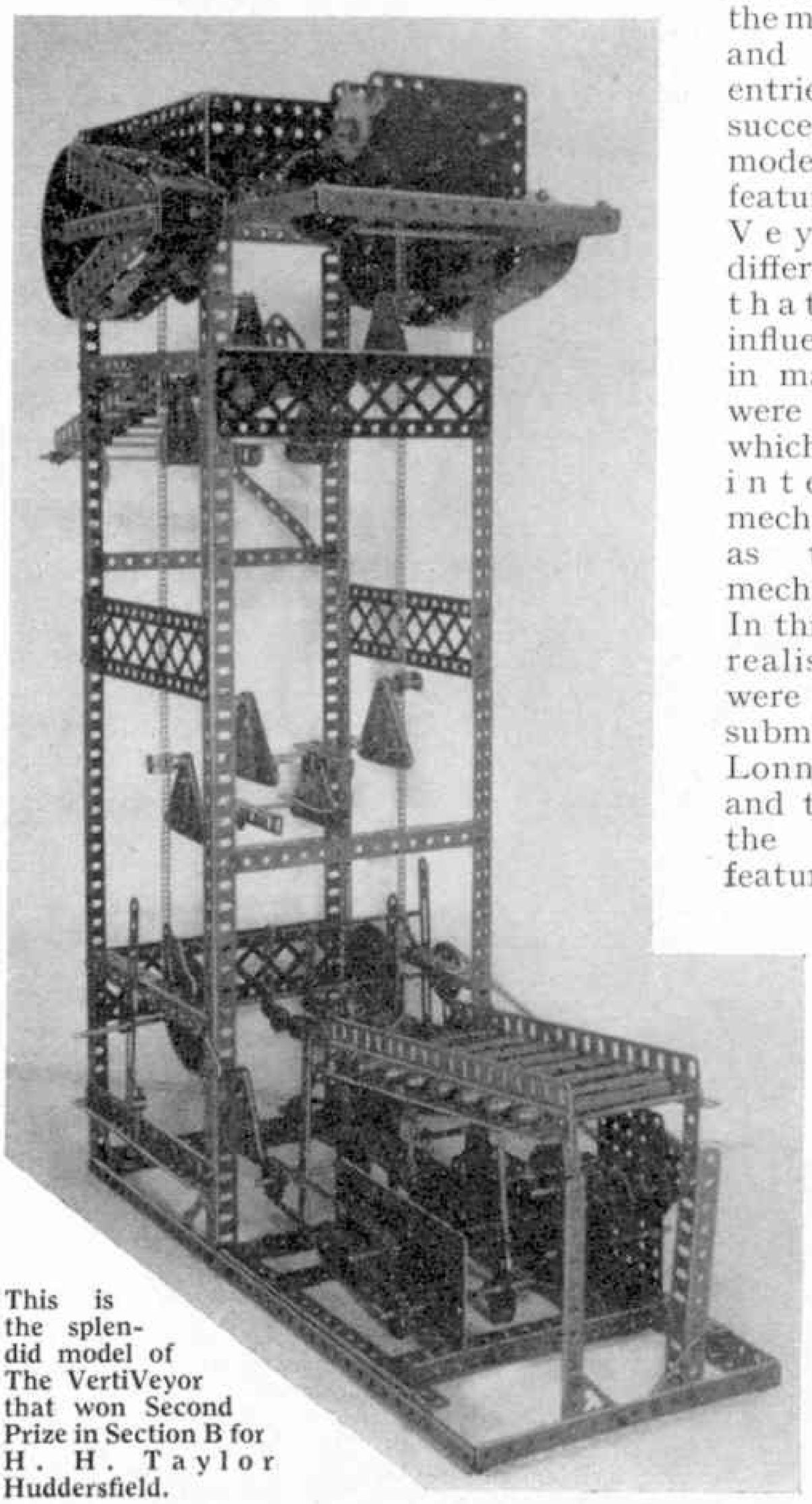
Section A (Competitors under 15 years of age)

First Prize: Cheque for £10 0s. 0d.—M. J. Poore, North Harrow, Middlesex; Second Prize: Cheque for £6 0s. 0d.—M. Lobenberg, London S.W.5; Third Prize: Cheque for £4 0s. 0d.—L. Doctors, Sydney, Australia.

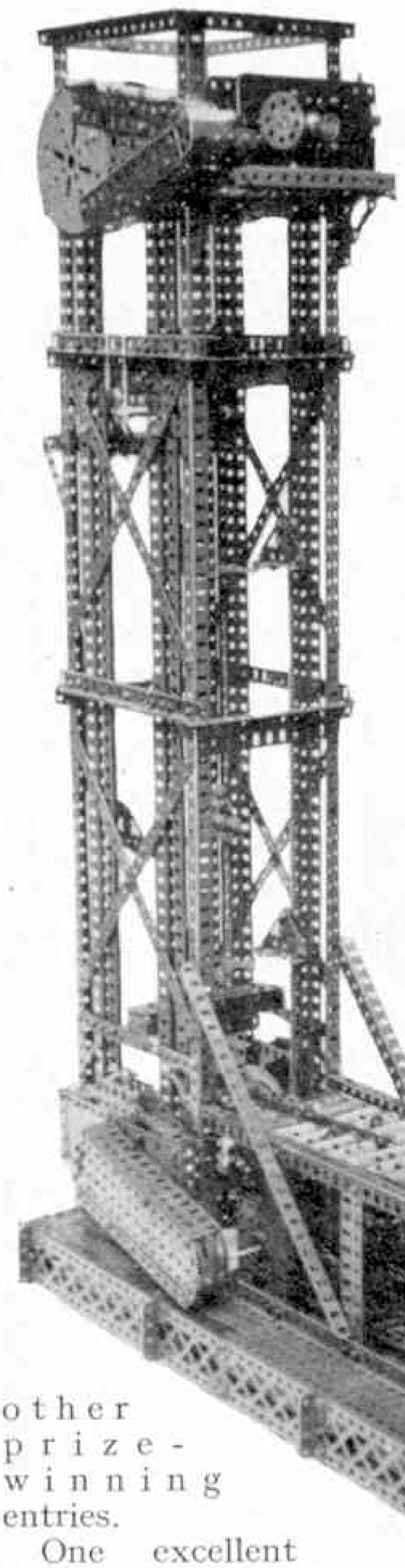
Section B (Competitors over 15 years of age)

First Prize: Cheque for £16 0s. 0d.—M. P. Lonnon, Farnborough, Hants; Second Prize: Cheque for £9 0s. 0d.—H. H. Taylor, Huddersfield; Third Prize: Cheque for £5 0s. 0d.—H. W. Henry, Strood, Rochester.

There was little to choose between many of the prize-winning entries so far as the external appearance of the models was concerned, and in almost all the entries a high degree of success was attained in modelling the structural features of The VertiVeyor. The real differences, and the ones that carried most influence with the judges in making their awards, were in the manner in which competitors had interpreted the mechanical details, such as the load feeding mechanism, in Meccano. In this direction the most realistic arrangements were found in the model submitted by M. P. Lonnon, Farnborough, and these, together with the excellent external features of his model, won for him the First Prize in his Section. Unfortunately I am unable to illustrate his model here, as his entry consisted of pencil drawings only and these were unsuitable for reproduction in the *Meccano Magazine*. This applies also to many of the



This is the splendid model of The VertiVeyor that won Second Prize in Section B for H. H. Taylor Huddersfield.



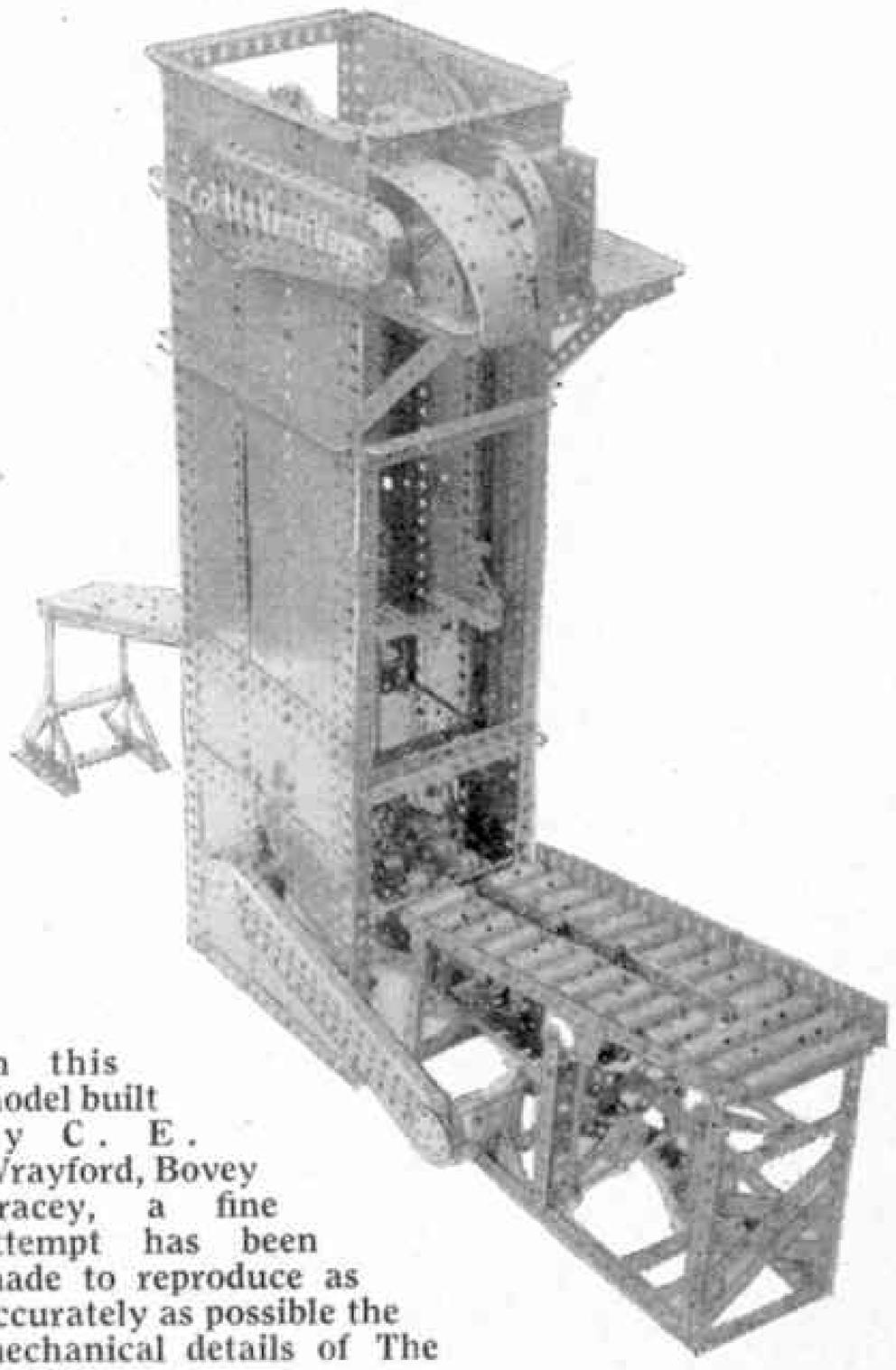
Another successful version of The VertiVeyor, built by W. A. Clough, Newport, Mon.

other prize-winning entries.

One excellent model that I am able to illustrate is that built by Mr. H. H. Taylor of Huddersfield, who was awarded Second Prize in his Section. This model is shown on page 360. The load trays in this are spaced 56 links apart from each other on the Sprocket Chains to which they are attached, i.e. at a distance equal to one revolution of the 3″ Sprocket Wheels over which the Chains pass. A 1½″ Sprocket Wheel on the Rod of the lower 3″ Sprockets drives the intermittent load-feeding mechanism at half speed, but this is stepped up again by a 1:2 drive that operates the load stops and pusher mechanism, which act sharply and in time with the movements of the loading trays past the feed-in point.

In the Section for model-builders under 15 years of age, I was surprised to find how clearly these young competitors had understood the operation of The VertiVeyor mechanism. Although limitation of Meccano parts had obviously made it impossible for them to attain the standard of more advanced builders entering in Section B, the quality of their work was really good. First Prize winner John Poore, North Harrow, is only 12 years of age but his work shows that he has a splendid grasp of mechanical matters and that he is thoroughly competent in the reproduction of tricky mechanisms in Meccano. Congratulations John on your success. I am sorry I cannot illustrate your model, but neither the pencil drawing, excellent though it was, nor the small photographs you sent, are suitable for reproduction.

In conclusion I would like to congratulate all the prize-winners whose entries I have been unable to mention. Their entries were well worthy of the success they achieved, for The VertiVeyor is by no means the easiest of subjects to reproduce faithfully in miniature. One of the difficulties is the quantity of similar parts required, and I was surprised to find that so many model-builders had been able to cope with this aspect of the matter.



In this model built by C. E. Wrayford, Bovey Tracey, a fine attempt has been made to reproduce as accurately as possible the mechanical details of The VertiVeyor.

HORNBY RAILWAY COMPANY

Going Western Again

By the Secretary

WE have had one or two talks in these pages on Western Region matters in Hornby-Dublo, particularly in connection with the running of the splendid *Bristol Castle* Locomotive and the fine brown and cream Corridor Coaches produced specially for it. These have become well established as favourites among Gauge 00 miniature railway owners generally.

As it is now getting on for summer holiday time I expect that many of you will be thinking about special summer services on your Hornby-Dublo layouts and this will apply particularly to Castle owners. The followers of the Western Region have a really fine choice in the matter of holiday trains that they can reproduce in miniature. On practically any of them *Bristol Castle* is specially appropriate. Last year, you may remember, the real *Bristol Castle* appeared quite a few times on the *Cambrian Coast Express*, as recorded in *Railway Notes* at the time.

An express goods train hauled by "Bristol Castle" runs out of a miniature tunnel, the ornamental face of which suggests "Western Region". Tunnel mouths are readily made from card and it is not difficult to mark them up to represent characteristic stonework.

In order to run your miniature *Torbay Express* or *Cornish Riviera Express* with real satisfaction you must of course make sure that your engine is in first class running order. This applies to any Locomotive, but I feel that some Castle enginemen still do not appreciate that lubrication on a little-and-often basis is recommended if the best results are to be obtained. Obviously too, you will see that rolling stock and track are in equally good order. It is a bad thing to let down your passengers in the height of the summer holiday rush, even in miniature!

Another point, even if you are busy with summer workings—do not overload your engine. You will know by experience the number of Coaches that it will take comfortably, so don't go beyond this. Remember that Western Region timings are worked out very carefully with due regard to engine performance and load, so be guided accordingly.

You will make good use of your Train Name and Destination Board Labels in running your summer service. They are used to good effect in the illustration at the top of the opposite page showing the *Torbay Express* in Hornby-Dublo form making its way alongside a make-believe river, which represents the Dart.

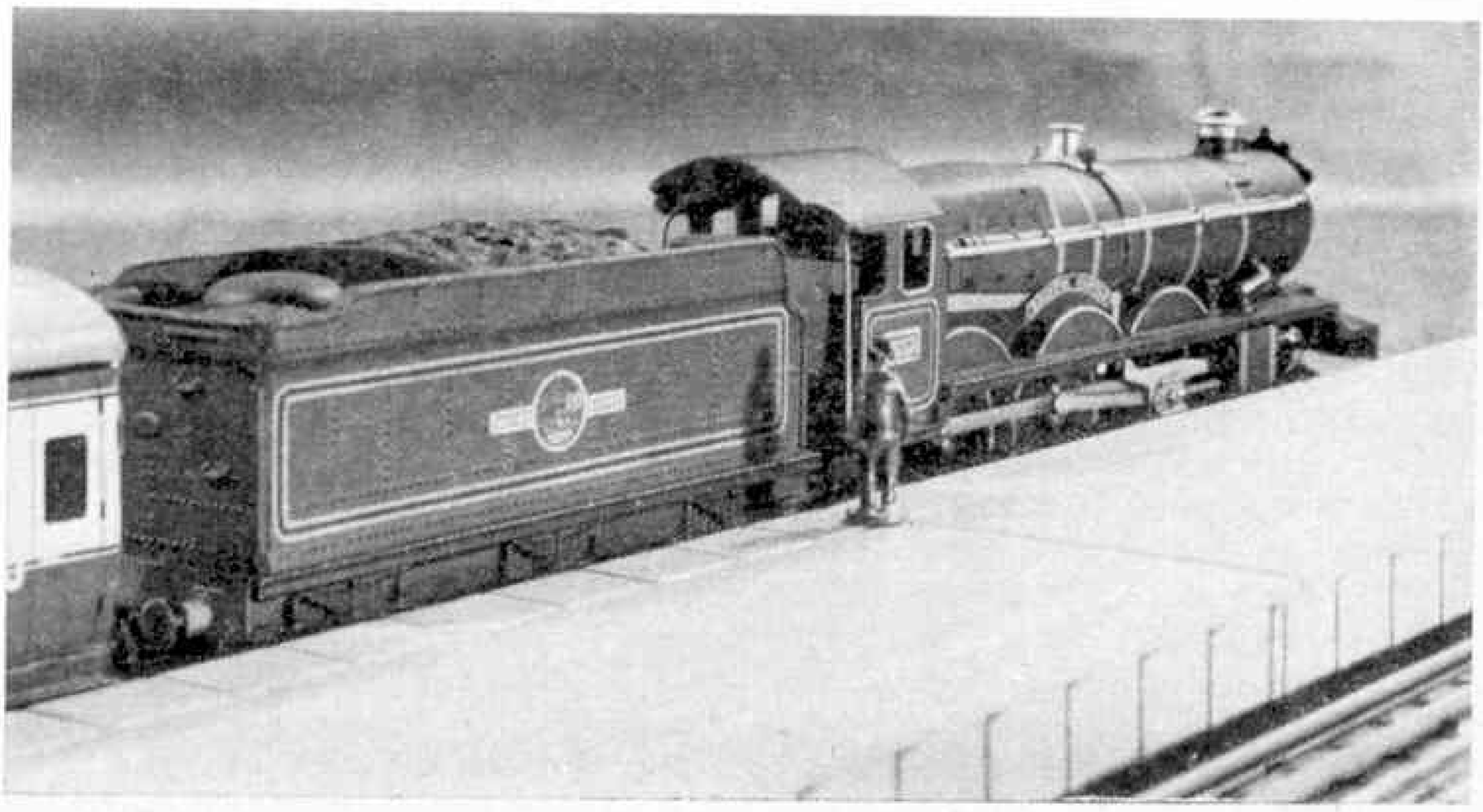
How did we make the river? Fortunately, that is quite easy nowadays. A sheet of cellophane laid over a base coloured with a medley of blues, greens and browns, gives quite a good effect, but do not overdo the colouring. If you have no cellophane handy, remember that there are all kinds of bags, wrappers and so on made of plastic material about the house nowadays, so see what can be spared for your river making, if you want to follow up this particular scheme. Of course you can use glass, if you wish, but it is not always easy stuff to manage and it never seems to be the right shape.

The "Torbay Express" in picturesque surroundings on a Hornby-Dublo layout. Engine and coaches carry the appropriate nameboards.

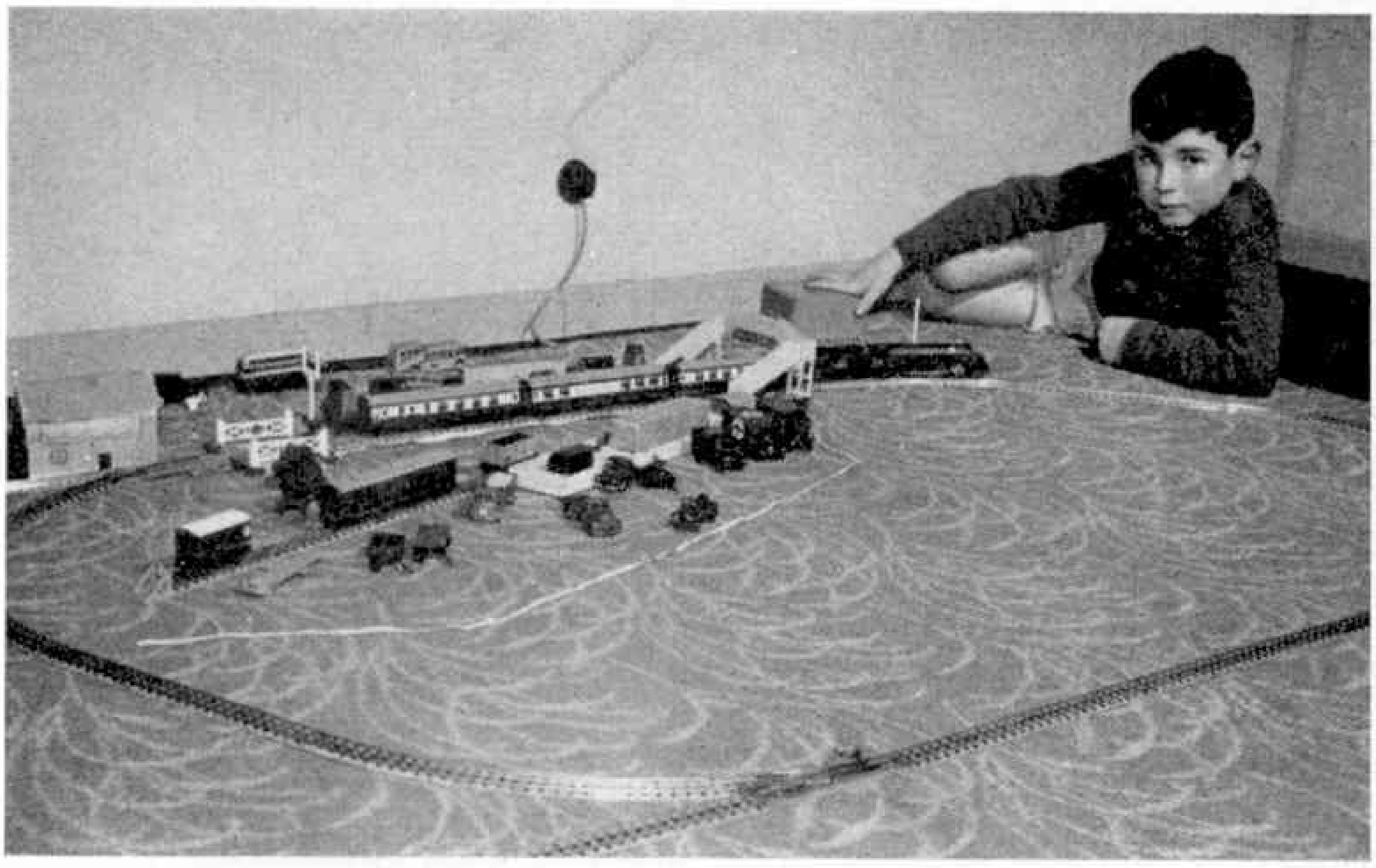
A point that should not be missed is that your passengers will expect to be fed on their journeys to and from the miniature West. So make sure that you include a D20 Restaurant Car in W.R. brown and cream in the formation of your more important trains at least. There is a great demand for restaurant vehicles in summer time and probably more of these work in and out of Paddington at the height of the summer rush than anywhere else. It will give you some nice exercise in carriage working arrangements if you have to get the greatest possible service from a single Car. Some rapid re-marshalling may be necessary at intermediate stations. Through running trains from other Regions will need to be represented in your operating programme, and here you will have plenty of scope for using D12 and D22 Corridor stock, with Restaurant Car of course.

The miniature *Torbay Express* in the illustration above carries the standard Hornby-Dublo Headboard and name labels, but *M.M.* reader I.R.Canavan, of Coventry, has written concerning a further development that is specially appropriate for the period of heavy summer traffic. He says: "I wonder if you know that Western Region reporting numbers can be represented on *Bristol Castle*? I use the following method. A metal Headboard as used for *Duchess of Montrose* is clamped on to *Bristol Castle*, held securely by the handrails, and also stopped from falling by the "hands" on the smoke-box door. Small white figures, $\frac{3}{10}$ in. high are mounted on a black background, which is pasted on to the Headboard.

"In the cases where the Hornby-Dublo Labels *Cornish Riviera*, *Torbay Express* or *The Bristolian* are used, the Castle Headboard is clipped down in the usual way, on top of the reporting number, and the result looks quite realistic. I also make sure that I keep a full up-to-date list of Western Region reporting numbers, and so far I have 20 different reporting numbers.



A familiar platform scene in miniature, with "Bristol Castle" ready to be off.



Peter Lord, of Exeter, has a fine time with his Hornby-Dublo railway on the floor. Photograph by Woodville Studios.

I Want Your Layout!

By "Layout Man"

"Layout Man" describes readers' Hornby-Dublo layouts of special interest. You are invited to write to him about your railway, and to send photographs or layout drawings for reproduction in the M.M. *Payment will be made for descriptions and pictures used in the Magazine.—Editor*

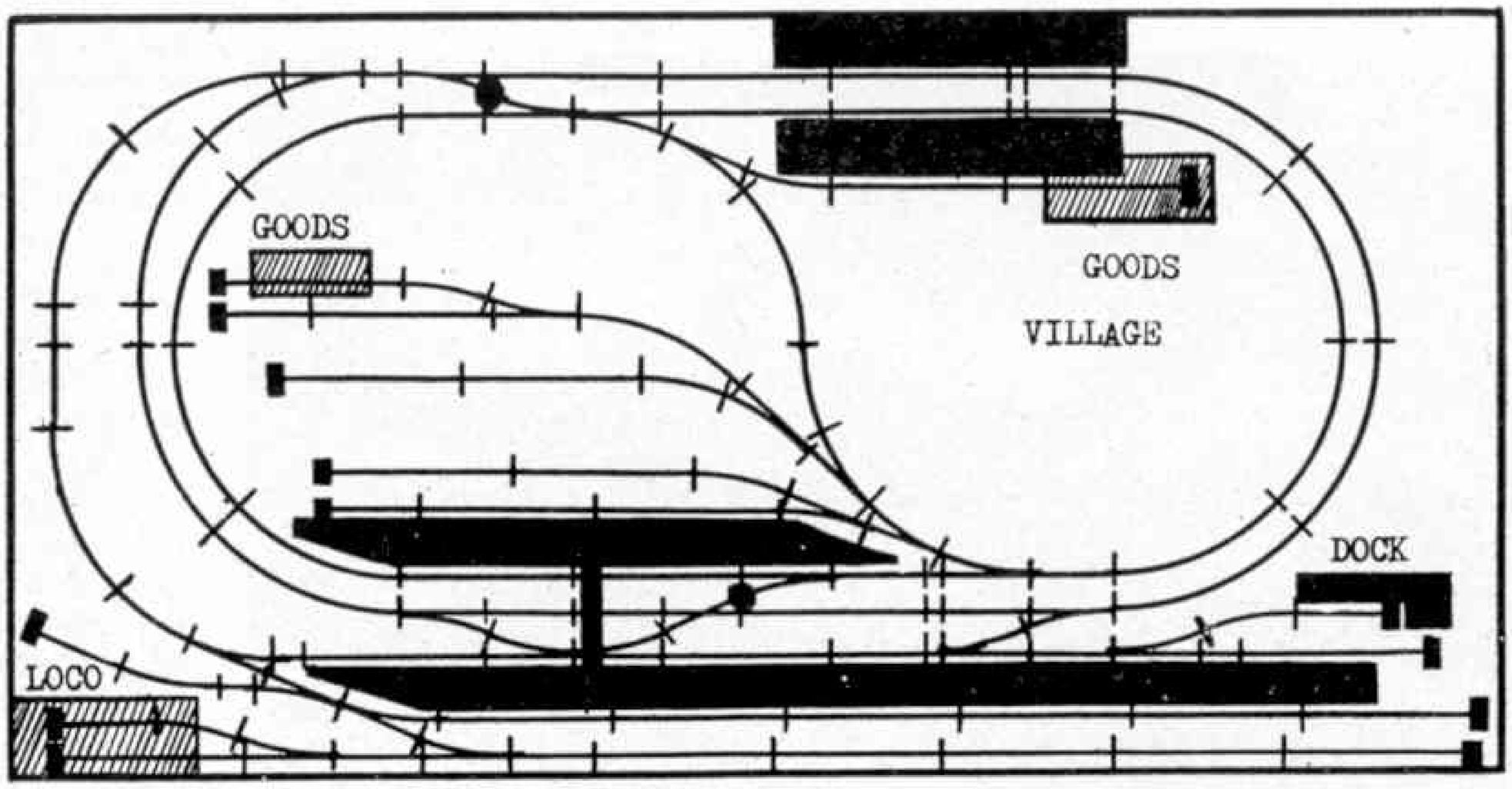
IT is always interesting to see what our Hornby-Dublo friends look like and there in the picture above is Peter Lord with his railway, which is a simple but effective affair laid on the floor. The line is not a big one, but I know that it gives its owner a great deal of pleasure, not only in train running operations, but in the effective disposition of the various Dinky and Dublo Dinky Toys that he introduces into it. Those that you see in the centre of the layout have got there by using the Level Crossing that is prominent near the rear end of the passenger train.

As is often the case nowadays, this Hornby-Dublo owner makes a feature of home-built lineside structures. These are adapted from the simplest of materials. For instance, the goods platform shown in the centre of the picture appears to be a shallow cardboard box that happens to be just the right height, and on this are placed other card structures of similarly simple character. There is a passenger station too, on the far side of the track, and a junction and Level Crossing gates are immediately under the eye of the signalman in the fairly large home-built cabin that appears at the left hand end of the picture.

All this is very simple and enjoyable, and it is clear that this is only a beginning. The layout is one that will allow for extensive development, and it will be interesting to see how it grows.

Now look at the layout diagram at the head of page **365**. This shows the system of H. J. Lamont, of York, whose problem has been the familiar one of squeezing a comprehensive layout into a given space. The area available is 8 ft. × 4 ft., which is reasonably generous. A double track main line was considered essential when the system was being planned, but certain marshalling and other operations based on those frequently carried out at important real intermediate stations had to be catered for. Therefore the platforms that make up the more important of the two stations included on the layout run alongside practically the whole of the length of straight track available along the lower side of the layout in the diagram.

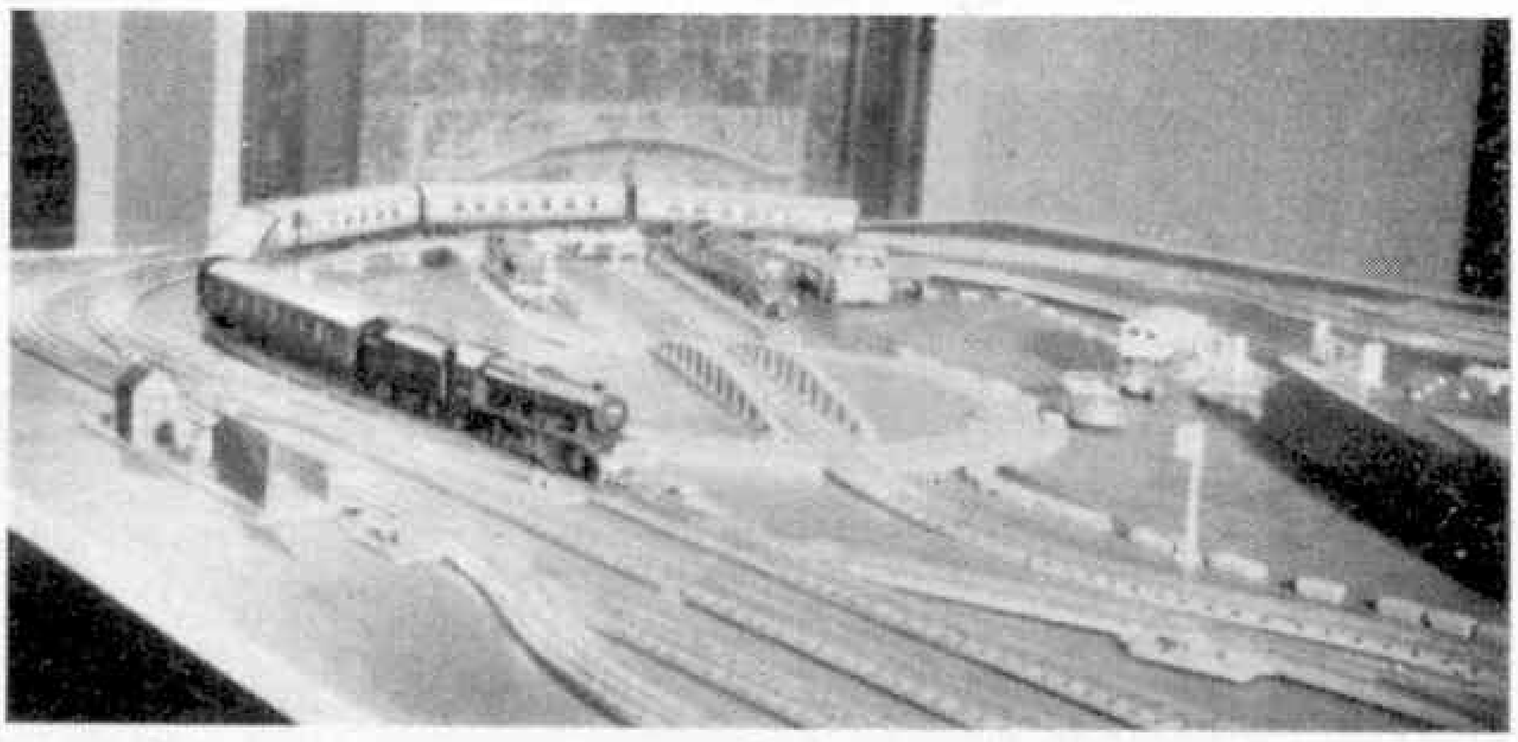
In addition to the up and down main



The comprehensive 8 ft. by 4 ft. Hornby-Dublo layout of H. J. Lamont, of York. This was specially designed for the operations described in this article.

lines there is a relief line for practically half the distance round the circuit that can be reached from either of the main running tracks or can feed traffic into them. So far as through traffic is concerned it starts as part of the loop whereby trains running on the outer main track in a clockwise direction reach the platform at the main station. Trains not stopping can run right through on the main track, which becomes the centre road of the three between the two platforms. Incidentally, the latter are connected in a realistic manner by a footbridge and beneath this come cross-over roads and a Diamond Crossing, which is useful and indeed necessary for the train working arrangements that form part of the regular programme.

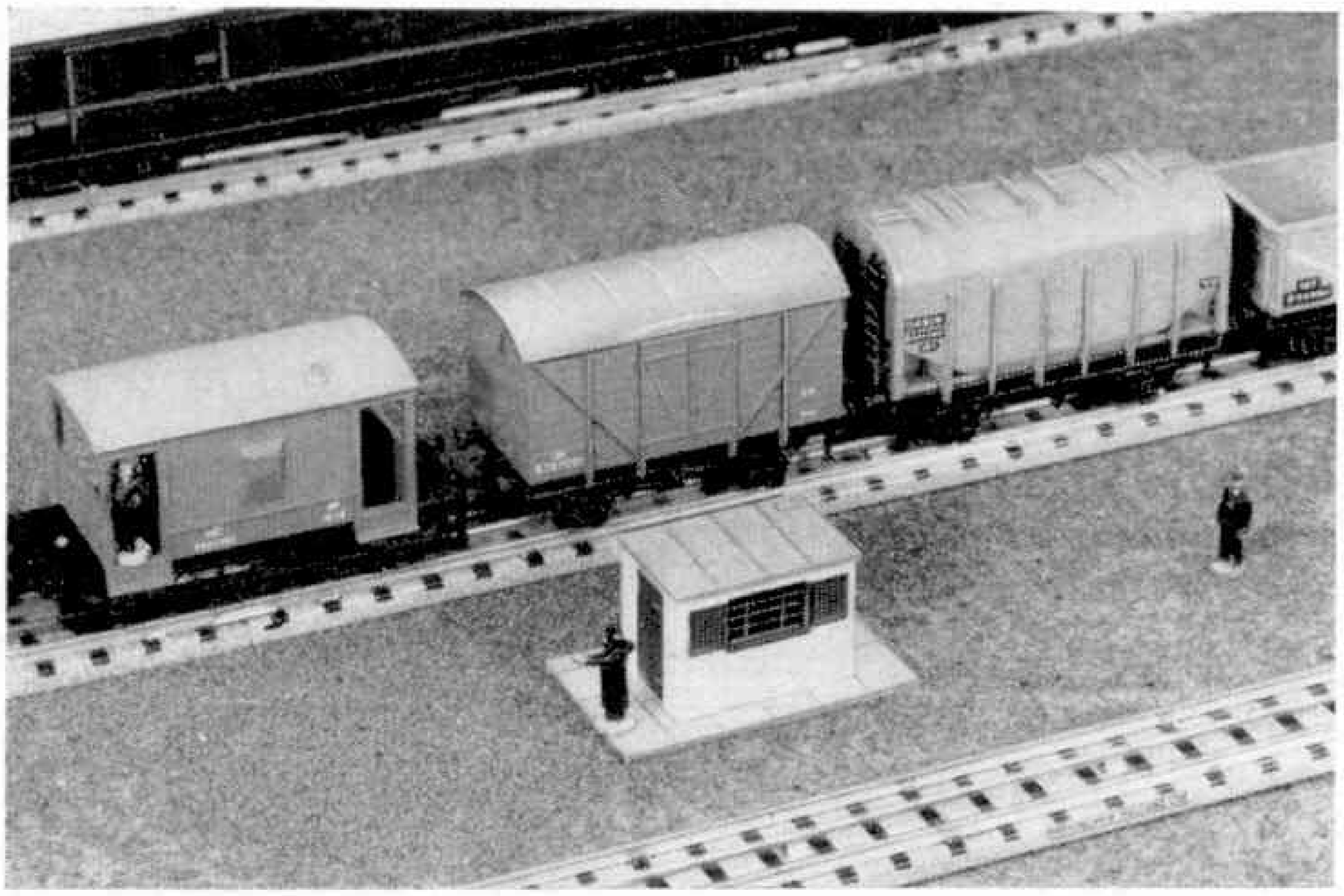
A feature of the station working is that trains stopping intermediately can have Coaches added, or they can be split into sections for different destinations, have say a Restaurant Car attached, or detached, and so on. The operations particularly in mind in making the necessary working arrangements are based on those carried out at Exeter Central. An interesting feature is the relief line, with its connections leading to the reverse loop. These make it possible for a train to leave the long platform at the main station and after making its journey, possibly with varied station operations at an intermediate stop, to be reversed and make its way to the point from which it started. I expect that some of you will be interested to work out other varied operations that you would like to carry out if this railway were your own.



Part of the extensive layout of Brian Pedley, of Southborough, on which a fine selection of trains can be run.

Finally, let us look at one end of the layout of Brian Pedley, of Southborough. I have chosen this one because it shows how well the Turntable can be worked in to serve several off-going tracks where engines can stand. Another interesting feature is a section where the track is raised slightly above baseboard level on a series of blocks. This makes a change from the otherwise "flat" appearance that the system would have at this point.

I think that the train running on the raised section is a holiday relief, as the engine is the Hornby-Dublo 2-8-0.



The Hornby-Dublo Platelayers' Hut, here shown standing on a Dinky Toys Pavement section.

The Hornby-Dublo Platelayers' Hut

THE pictures on this page, and the details that follow, herald welcome news for all Gauge 00 railway owners, for they centre on something new in the Hornby-Dublo system—the Platelayers' Hut that becomes available this month.

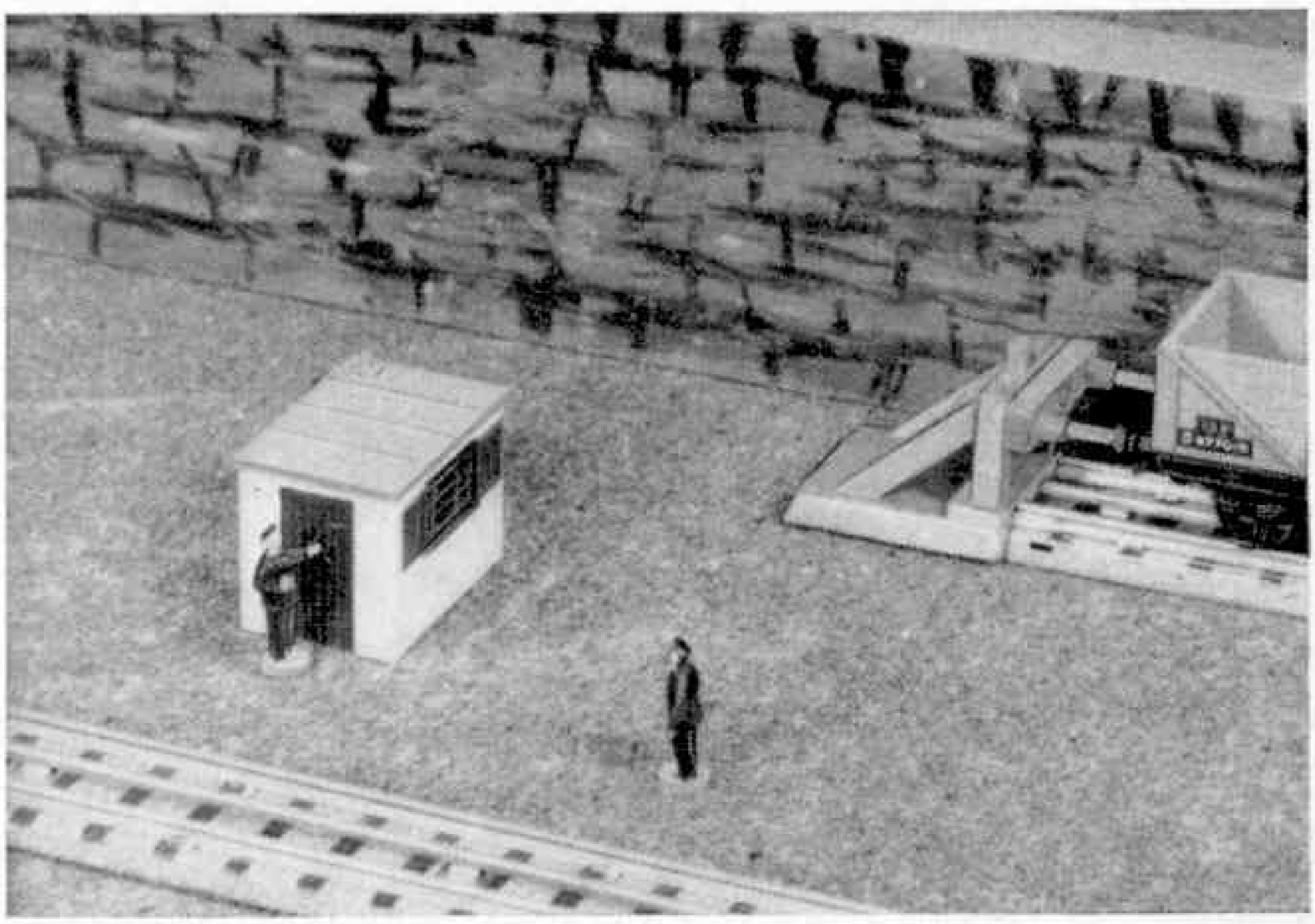
Just look at the Hut in the pictures. You will see that it is a delightfully neat little building of moulded construction, well detailed. It will fit in almost anywhere on the layout, and it is surprising to find how much its use helps to make a model railway look "real".

And it is up to date too, for its design reproduces the B.R. Standard type of hut that is becoming more familiar at the line-side as the older huts are replaced.

The plastic moulding process that produces the Hornby-Dublo Platelayers' Hut allows the inclusion of the most convincing details. The doorway at one end of the Hut is represented, and the door, although not made to open, is correctly planked and provided with representations of hinges and a door handle.

On one of the sides there is a window opening incorporating the type of modern frame used in the real thing and the modelling of this feature is completed by the representation of the hinged shutters in the open position. The roof is of correct section and is complete with a very dainty chimney pot in one corner. Altogether, indeed, the Hut is just what the track gang want to store their tools, and in which to get their meals.

Many Gauge 00 railway owners will find plenty of uses for the Hut, apart from its original purpose. It can become a coal office, perhaps, or a shunter's cabin in the goods yard.



The end and roof details of the Platelayers' Hut are clearly shown in this picture.

Club and Branch News

WITH THE SECRETARY

A WORD ABOUT VISITS TO WORKS

The Club and Branch summer programme, with its emphasis on outdoor sports such as cricket, tennis, cycling and rambling, should cater also for members who are not interested in these energetic activities. One of the most satisfactory alternatives is to arrange visits to places of interest, and advantage should be taken of the long school summer holiday to see "behind the scenes" in local factories which, owing to working a five-day week, are closed on Saturdays and thus cannot be visited during school terms.

Visits of this kind cannot be made upon the spur of the moment, but must be arranged beforehand—sometimes weeks in advance. The consent of the firm concerned should be obtained, a date fixed and the size of the party agreed upon with the company—many firms limit the number of visitors they will have at one time. Once this number has been agreed upon it must be strictly adhered to, and no "extras" added to the party on the day of the visit. Such additions can be very inconvenient for the company, putting them to the trouble of finding an extra guide and upsetting any catering arrangements they may have made. Please therefore keep the party down to the number of members agreed upon.

CLUB NOTES

NORTH END (PORTSMOUTH) M.C.—The Club and its associated H.R.C. Branch organised a Jumble Sale, first distributing to local householders a circular printed on the Club printing press and asking for contributions, and following this up a few days later by calling to collect any contributions to the sale. A profit of 25/- was realised by the event. A model-building competition is being held, from which it is hoped to have some outstanding models for display at a forthcoming exhibition. *Secretary:* Mr. A. J. Nicholson, 213 Sultan Road, Buckland, Portsmouth.

ASHTEAD FREE CHURCH M.C.—A day outing to London included a visit to the Tower and a tour of Tilbury Docks where members were able to visit the liner *Britannia*. The next model-building meeting was devoted to constructing dockside equipment based upon what had been seen at Tilbury. At one meeting members heard an interesting talk on *Aircraft* by the father of one of the members. *Secretary:* C. Price, 32 St. Stephen's Avenue, Ashtead, Surrey.

AUSTRALIA

FREMANTLE AND DISTRICT M.C.—The members are divided into two groups, the red and black factions respectively, and there is keen, friendly rivalry between them. Last year the red faction won the Club shield, with an aggregate of 280 points, the blacks scoring a total of 271. The Club year ended with the traditional party. The 1959 Club year began well, and already members have staged an excellent display at a local school fête, for which the Club received a donation. *Leader:* Mr. L. Smith, 18 Aurelian Street, Palmyra, W. Australia.

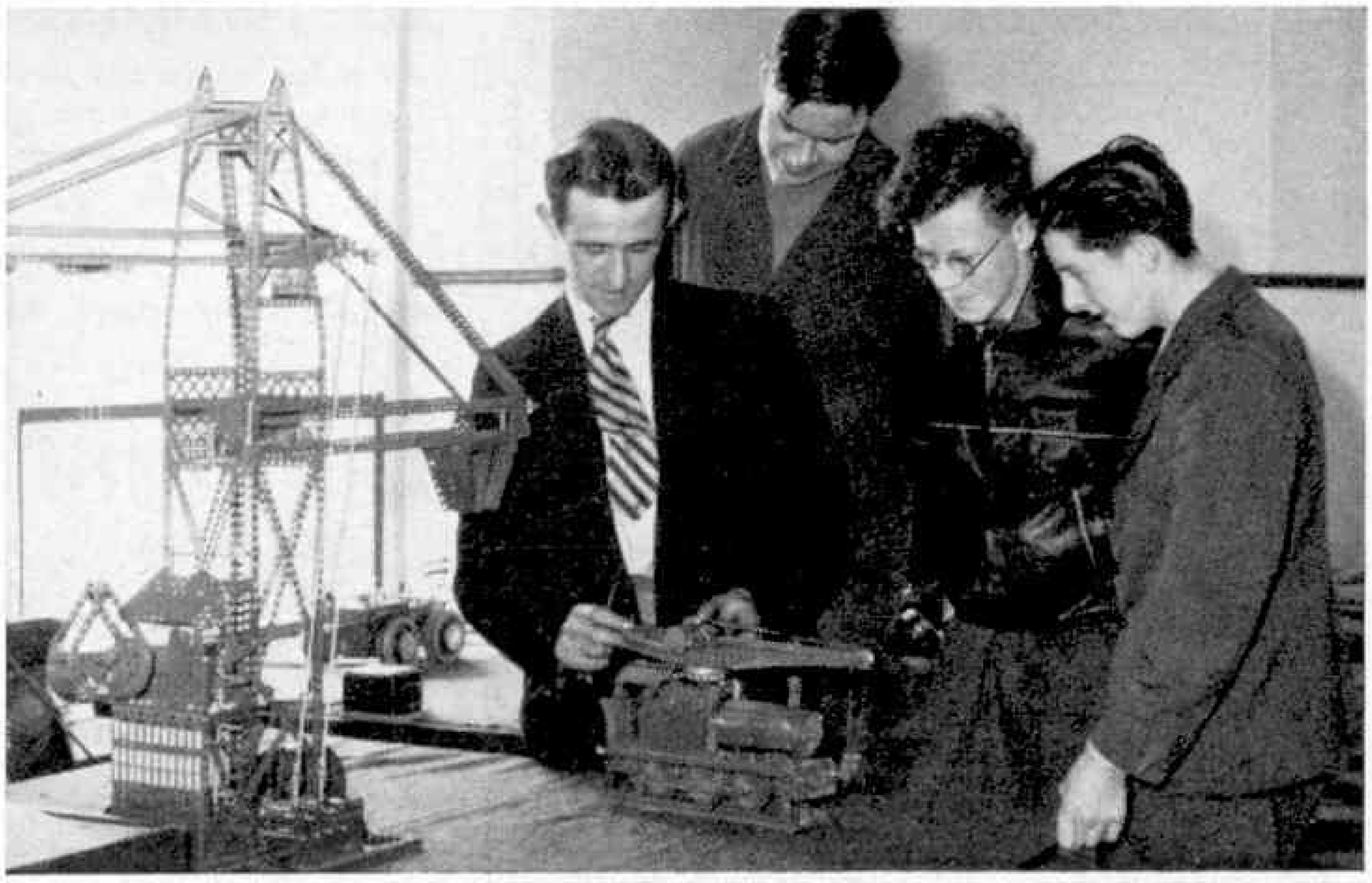
SOUTH AFRICA

CAPE PENINSULA M.C.—As a variation from the usual Club activities one or two meetings have been devoted to matters of railway interest. On one occasion Mr. Spence, the Club's "chief" lecturer, gave an interesting talk on *The Rainhill Trials*. *Secretary:* T. Venn, Ranfurly, Roodebloem Road, University Estate, Cape Town, South Africa.

BRANCH NEWS

EDLINGTON COUNTY SECONDARY SCHOOL.—Meetings have been held at least once and usually twice a week. A Restaurant Car has been bought for inclusion in a 4-coach train, one vehicle of which is the T.P.O. Mail Van. The compiling of a new train running programme is being considered. *Secretary:* T. Gater, 82 Markham Road, Edlington, Doncaster.

3RD WIGAN SCOUT GROUP.—Lunch hour meetings have continued and have been well attended. At one meeting a film strip entitled *Growth of Railways in Britain* was screened. Six "Bob-a-Job" Champions are to visit Headquarters at Liverpool. *Secretary:* Mr. T. Gore, 108 Beech Hill Lane, Wigan.



Mr. Denis Snowden, leader of the Meccano section of the Consett Y.M.C.A. M.C., making final adjustments to one of the Club's exhibits at the Y.M.C.A.'s recent Hobbies Exhibition. Looking over his shoulder is Brian Ward, deputy leader of the group and former Club secretary. The other two members shown are G. Trout, brother of the present secretary, and P. Nixon.

Illustration by courtesy of the "Consett Guardian"

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Stamp Collectors' Corner

By F. E. Metcalfe

BRITISH STAMPS OVERSEAS

It has been remarked frequently by collectors that political changes are reflected in their stamp albums. While this is fairly true in general, it is particularly so in the case of British stamps overprinted for use in countries overseas that have some connection or other with Great Britain, although frequently it is not easy to say what this is.

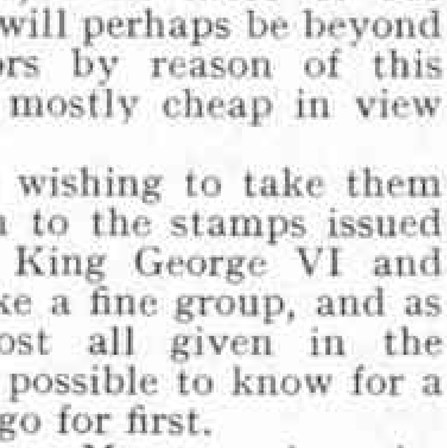
A glance at a stamp catalogue will show how many countries have in the past used our postage stamps. Now, alas, it would appear that by the end of this year those overprints will belong entirely to the past. So perhaps it might be worth our while to discuss them before they have all gone obsolete and increased in price, as they undoubtedly will.

Not only British stamps in the Commonwealth have been overprinted for use in other countries. For instance, the Cape of Good Hope provided some for Bechuanaland; stamps of Straits Settlements have been overprinted "B" for use at the British Post Office in Siam, the B standing for Bangkok; and, stranger still, stamps of Australia were overprinted B.C.O.F. Japan, 1946, for use, as the initials indicate, by British Commonwealth Occupation Forces.

Nor must I overlook mentioning India's part in this overprinting story, for apart from some of her contemporary stamps being overprinted in 1953 for the use of its custodian forces in Korea, Indian stamps were also overprinted in 1954 and 1957 for the use of the International Commission in Indo-China. The 1957 overprints are still in use, and therefore not hard to come by, but the 1953 stamps look like proving as scarce in the long run as some of the other stamps to which I have referred.

Other instances could be given of Commonwealth ventures in this interesting field, but it is our own British stamps about which I want to write. Before I refer in detail to the overprints, however, a word or two about British stamps used abroad unoverprinted may not be out of place.

If you turn to the pages in Gibbons Part 1, immediately after those wherein ordinary British stamps are listed, you will find an index, followed by a long list where only the postmarks differ from the straight run of stamps. But, as the prices show, these cancellations make all the difference in the world. In the old days Britain had postal agencies all over the world, from the veritable China to Peru, and each of these agencies had its own numbered cancellers, by which it is possible to tell where the postal packet was posted. For instance, postmarks on letters posted in Valparaiso, Chile, had C30 in the design, and Buenos Aires letters had B32. British stamps too were used abroad inside the Empire before the countries concerned had their own stamps. Jamaica, A01, and Gibraltar, A26, are cases in point.



Which reminds me of a purchase I once made, in Liverpool. A man mentioned that he had a bale of envelopes which he wished to dispose of. I was not very eager to buy, for in the days when this was happening, there was not the same interest in such things as there is now. However, the bale was bought, and it turned out to be almost as big as those of cotton which you can see down at the Liverpool Docks. There were thousands of envelopes, many with stamps bearing B01 (Alexandria), and A26 (Gibraltar) cancellations, and when I recall how little I then appreciated the treasure-trove I had obtained, I want to apply a kick—and not one aimed at someone else!

It is a fact that these overprints are not particularly popular with British collectors, even those of our own stamps, and while full sets will perhaps be beyond the pockets of junior collectors by reason of this relative unpopularity they are mostly cheap in view of their rarity.

I would suggest that anyone wishing to take them up should confine his collection to the stamps issued during the reigns of the late King George VI and Queen Elizabeth II. These make a fine group, and as the numbers issued are almost all given in the Commonwealth Catalogue, it is possible to know for a certainty which are the best to go for first.

The territories concerned are Morocco Agencies (Tangier, etc.), Bahrain, Eritrea, Somalia, Kuwait, Muscat and Dubai, Qatar and Tripolitania. Alas only three territories now remain that use our British stamps overprinted. The war was responsible for the Eritrea, Tripolitania and Somalia overprints, and as soon as we got out of those territories our stamps were withdrawn. Some of these stamps are already very scarce, and if ever they became really popular prices would really shoot up.

Attractive as are these "war overprints", the most interesting perhaps are those used in what were known as the Morocco Agencies. Overprints for this part of the world go back many many years, as collectors were reminded when on 1st April, 1957, a complete set of British "QE" stamps was overprinted Tangier 1857-1957 to commemorate the centenary of the British Post Office in Tangier. I remember going into that Post Office many years ago; it was very efficiently run, and I am sure that it was greatly missed when it was closed down.

This commemorative set is quite scarce, for only just over 40,000 copies of the high values were sold. The set indeed was on sale for one month only, as the Agency closed at the end of April, and at its present price of something under £2 is surely a bargain. Even a set to 1/6d. is well worth having, for sales of some of the pence values were only round the 60,000 mark.

Now that the Moroccan Agencies are closed and their stamps a dead letter, this brings me to the last remaining link, the Persian (*Continued on page 372*)

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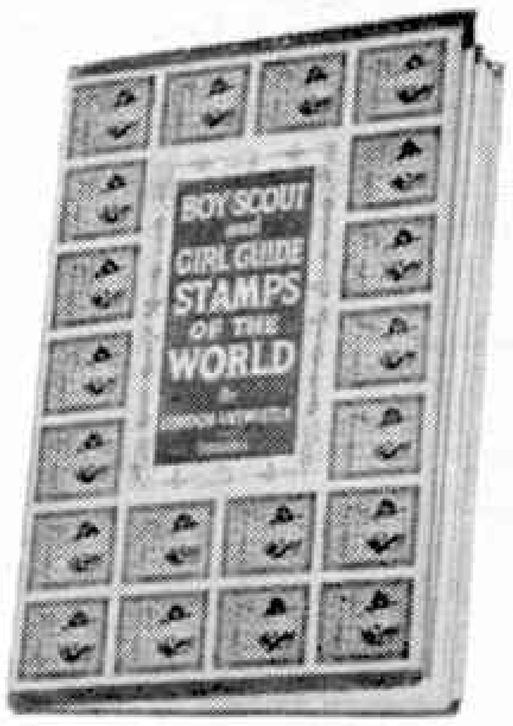

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For other Stamp Advertisements see also pages 368 and xxii

Stamp Gossip

TROPICAL AFRICA

I suppose whenever we think of tropical Nigeria we picture waving palms, deep forests and mangrove swamps. So we may think that tropical slogan postal cancellations might be *Beware of the Lions*, *Beware of Falling Coconuts*—a real danger, be it observed, in some parts—or *Beware of the Boa-constrictors.*

And what kind of postal slogans does Nigeria really have? The answer is *Licence your Radio.* Well, well! Has romance really departed from Africa, as well as from Europe?

NEW PAPER IN NEW ZEALAND

Recently a collector sent me two New Zealand stamps of the 1/9 denomination, as he and his friends had noticed how different the stamps were from each other. I like to see collectors studying their stamps in this admirable way.

In this instance my correspondents had come across an example of a deliberate change in paper. Examination of the "QE" New Zealand stamps up to the face value of 1/9 that were issued from 1953 to the beginning of last year shows that the paper used is on the thin side, and thus the designs do not show up as well as they might. In the values from 9d. to 1/9, this lack of substance is particularly noticeable. Now thicker paper has been adopted.

No doubt other values will follow in due course, but at the time of writing the 1/9 ordinary, and the 2d. service, have appeared in the new guise, and it is a good mark to my correspondent that he and his friends spotted the change.

POPULARITY

Each year a competition is held by *Linn's Stamp Weekly*, to decide which U.S.A. commemorative stamp issued during the previous year had the best design, which had the worst, and which stamp was the least necessary.

Now here is a competition worth noticing if you are interested in the stamps being judged, for there are so many voters. This year over 21,000 took part, and the stamp that won the best design prize was the Forest Conservation issue illustrated on this page. For once in a while I will not grumble too much at the decision.

The stamp voted to have

the worst design was the "Gardening and Horticulture" commemorative, and it was also judged the least necessary, so it had a doleful double. This also is illustrated, so you can judge for yourselves. Here I disagree. Any competition in which one entry was as trite and downright ugly as the Atlantic Cable stamp could hardly have another as moderate. This I have not illustrated!

MORE FLOWERS

Those who complained about America's Gardening stamp did so on the grounds that the design was too fussy and over elaborate. There is some justice in this criticism, as we realise when we see how Israel, that country of classic designs, produces a flower stamp. Just compare the one illustrated with the U.S. stamp.

Israel stamps are widely collected, and to a great extent this is due to their beautiful and original designs. Among thematic collectors, few stamps are more popular than those depicting flowers, so the new Israel issue of three stamps, all devoted to flowers, is naturally a best seller. But apart from the subject, its treatment in this issue has a lot to do with this popularity.

NEW ISSUES

Quite frequently I am asked which is the best way to collect British Commonwealth stamps of the present reign, and how one can keep up to date with the new stamps which come out. Well the obvious way is to join a new issue service. Plenty of dealers run one, and those who do will mostly let you take up to what top value you prefer.

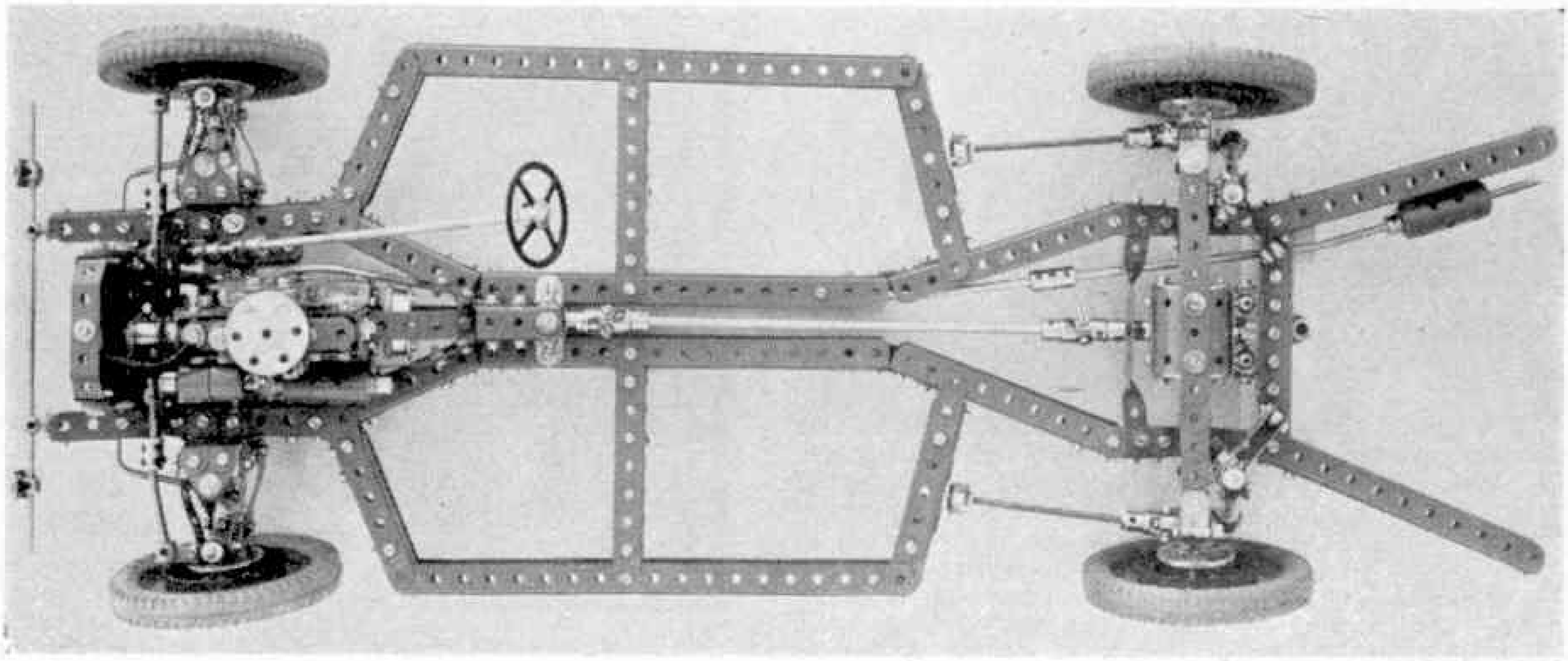
Any stamp dealer who runs a service will give you all the details. You will have to leave a deposit. Generally, if you only take up to 1/—and that is the minimum top value—the deposit will be round about £1, and if you go up to the highest value between £4 and £5, if you want a big range of countries. Altogether your monthly expenditure on these new Commonwealth stamps will run from about 10/– to £3 or £4, and for that sum you will be able to get all the stamps as they are issued, via your service.

Some dealers even run services for used stamps as well as mint, but personally I think mint are to be preferred, for most of the used belonging to the smaller colonies are merely cancelled to order, in sheets, and never called upon to do postal service.

THE TIP OF THE MONTH

India is changing the watermark on its stamps, and as dealers have to send all the way to India for supplies, and air mail postage is expensive, they never go in for big stocks. In 1957-1958 this sister country brought out a set of stamps bearing the map of India up to 90 np. The stamps had the old "Star" watermark. Now the watermark has been changed for most values, leaving the original stamps obsolete.

So buy now the 1957-58 set with the star watermark. And it will be well to act quickly.



Many readers will recognise the model shown above at a glance. It reproduces the chassis, engine and transmission of the Triumph Herald, the striking new car recently announced by Standard Motors Ltd., and appearing at about the same time as its Dinky Toys version. The model was built for exhibition in the showrooms of Meccano Ltd., Berkeley Square, London, where it has attracted the greatest admiration. One remarkable feature of the Triumph Herald is the return in the design to the use of box section girders forming a chassis, the shape of which is admirably shown in the Meccano model.

Slimbridge—(*Continued from page 340*)

and has brought to Eastern England the opportunity of seeing a wonderful variety of wild fowl.

The Wildfowl Trust includes full members, junior members under the age of 21, and associated members, all of whom have free access to pens and observation huts at Slimbridge and Peakirk, and there is a special grade of membership that will appeal to many of the younger readers of the *M.M.* who are interested in Nature study. For this all under the age of 16 years are eligible. The annual subscription is 7s. 6d., and members receive a Membership Card and a badge.

Members of this grade are known as Goslings. They are entitled to free access to pens at the New Grounds and at Peakirk on Saturdays and Sundays, and an interesting scheme of promotions has been introduced. Any Gosling who in a test can name 10 out of 15 different kinds of duck, geese or swans pointed out to them becomes a Pink-foot, and a red star is fixed on his or her membership card. By further tests advancement can be made through the grades of Whitefront and Greylag, the latter being the senior rank of Gosling, and here again membership of the grade is indicated by stars, white for a Whitefront and blue for a Greylag.

Gosling members receive the present of an "Adopted Duck" each time they renew their annual subscriptions. This means that to them is allocated a bird that has been ringed on behalf of the Trust. This may be given a name selected by the adoptor, who is informed whenever the bird is recaptured, or recovered dead, so that he or she can follow as far as possible the life of the adopted bird.

A special leaflet explaining this grade of membership and including an application can be obtained by writing to the Editor, *Meccano Magazine*, Binns Road, Liverpool 13.

Stamp Collectors' Corner—(*Continued from page 369*)

Gulf territories. Both Bahrain and Kuwait, before India broke away, used Indian stamps overprinted. Then came our own British overprinted, and to the Gulf list were added Muscat and Dubai, and Qatar. It is a nice little exercise to get out an atlas and spot just where these countries lie.

Oodles of oil have made these countries rich and feel their own importance, and the first to have its own stamps is Kuwait. Besides our stamps Kuwait had three "locals", that is stamps valid only for postage inside the territory. But in February, Kuwait brought out a fine set right up to 10r. De la Rues were the printers, and it is interesting to note that two of the three locals have been incorporated in the new set. The third, the 40np, has been replaced, but the old stamp, now with international status—for Kuwait has joined the U.P.U. which gives that status—has been used up on overseas mail. So if you buy the set, and want it complete, get a copy of both the old and the new 40np, if you can.

And now we are just waiting for the other Persian Gulf territories to bring out their own stamps, and a chapter in British history will be closed. Yes, these "overprints" are historical and well worth collecting. My advice is to buy them now.

TALYLLYN RAILWAY PRESERVATION SOCIETY

Any reader of the *M.M.* who joined the above society at the Model Railway Club Exhibition in early April, and received membership card numbered either 1/1081 or 1/1082, is asked to send his name and address to the Secretary at the address given on the back of this card. The details of the enrolments of the members concerned have unfortunately been lost, and the usual communications cannot be sent to them.

DOLLS THROUGH THE AGES EXHIBITION 1959

H.R.H. The Duchess of Gloucester will visit the "Dolls Through the Ages Exhibition" at the Ceylon Tea Centre, 22 Regent Street, London S.W.1, at 12 noon on the 15th July, the opening day. The Exhibition is in aid of the Greater London Fund for the Blind (incorporating United Appeal for the Blind) and will remain open until 7th August. The hours of opening are: Mondays to Saturdays, 10 a.m. to 6.30 p.m.; Sundays, 2 p.m. to 6 p.m. Prices of admission: Adults, 2/6d.; Children under 16 years of age, 1/-.

A MODEL AEROPLANE FLYING RISK

A recent accident resulting in the death of a young man draws attention to the danger of flying model aircraft controlled by a cord or wire in the neighbourhood of overhead lines. In this case there were two control wires and one made contact with the overhead line, resulting in severe shock and burns which later proved fatal. Two other people also suffered electric shock. It is obviously unwise to fly this type of model aircraft in the neighbourhood of any overhead line, whatever the voltage.

From Our Readers

This page is reserved for articles from our readers. Contributions not exceeding 500 words in length are invited on any subject of which the writer has special knowledge or experience. These should be written neatly on one side of the paper only, and should be accompanied if possible by original photographs for use as illustrations. Articles published will be paid for. Statements in articles submitted are accepted as being sent in good faith, but the Editor takes no responsibility for their accuracy.

Layer Marney Tower

While touring in the Eastern Essex countryside, my friends and I came upon the tall structure at Layer Marney that is seen in the accompanying photograph. We discovered it to be a gate-house of eight storeys and eighty feet high, built of red brick, and with many barred windows. It was erected by order of Sir Henry Marney, a close friend and counsellor of Henry VII, who was Lord of the Manor, as the first stage of a wonderful mansion.

Alas, Sir Henry died in 1523 with only the gate-house and two adjacent wings built and these remain a dignified memorial to him. He was probably our first "skyscraper" builder.

H. MUIR (Walthamstow).

Was this Britain's first "skyscraper"? See the article on this page by H. Muir, Walthamstow.

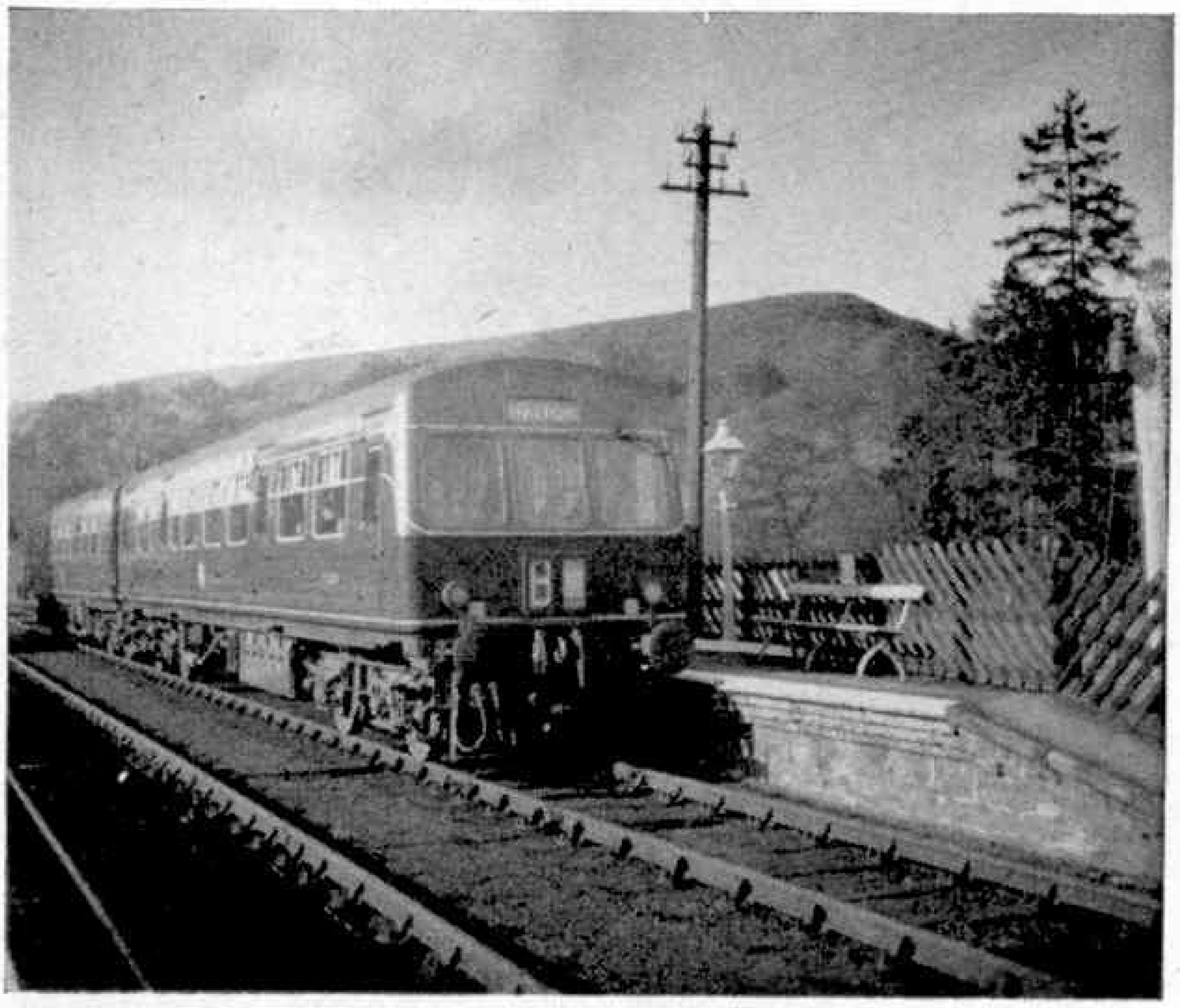
A New Diesel Service

A few years ago during the school Easter holidays we went to stay near the station of Levisham, on the Malton-Whitby line. It was, therefore, with interest that I read the article about this railway in the March 1959 issue of the *Meccano Magazine*.

This year we decided to revisit our old holiday haunt. When we arrived at Levisham, by car, we found that a diesel service had opened only the Monday before, and the accompanying photograph, which my father took, shows the 4.0 p.m. from Whitby standing there.

From Levisham onwards to the New Bridge signal box just outside Pickering the line is single.

S. R. J. FORD (Bainton).



One of the diesel trains now running between Whitby and Malton. It is seen at Levisham station.

Summerfield

"Why can't you wait 'til we get to the fire before you raise the escape!"

"Doctor, how would you take this? My brother writes that he has a stalk of celery growing from the top of his head."

"With a grain of salt."

* * * *

Customer: "Look here, this suit of clothes you sold to me began to fade as soon as I got into the sunlight."

Clothier: "Well, didn't I tell you that you couldn't wear it out?"

* * * *

Visitor: "Is it far to the next village?"

Old Inhabitant: "Well, it seems further'n what it be, but it bain't."

* * * *

Boxer (on his way to the ring for his first big fight): "Isn't it a long distance from the dressing room to the ring?"

Second: "Don't worry about it now. Who knows, you may not have to walk back!"

* * * *

The boarding-house keeper served her guests a plate of bread and butter, sliced so thin as to be almost transparent. "Did you cut these, Mrs. Skimp?" one of the boarders asked.

"Yes, I did," she replied.

"Fine!" said the boarder, "I'll shuffle and deal."

* * * *

Raymond: "Since I bought my new car I don't have to walk to the bank to make my deposits."

Johnson: "Drive over now, eh."

Raymond: "No, I just don't make any."

* * * *

Traveller: "What's the use of having a time-table if your trains don't run to it?"

Porter: "Now, now, you're all excited. How can you tell they are running late if you don't have a time-table?"

Fireside Fun

Fortune-teller: "You will be poor and unhappy until you are 40."

Client: "Then what?"

Fortune-teller: "You'll get used to it."

* * * *

Little boy: "I'm calling to make an appointment with the doctor."

Nurse: "I'm sorry, he's out."

Little boy: "Thank you. When will he be out again?"

* * * *

Susie: "Mother, you know that vase you said had been handed down from generation to generation."

Mother: "Yes, my dear."

Susie: "Well, this generation has just dropped it."

* * * *

THIS MONTH'S BRAIN TEASERS

RECIPE

(Not one of Mrs. Beeton's!)

Ingredients: Take an abusive parrot, a Gloucester inn, some old maps and a barrel of rum. Use a man with one leg to stir the mixture well together in an old sea chest. Add a good splashing of rum followed by a small boy and a medico, then season well with salt water. Pour the mixture into a good storyteller, sprinkle with tropical sunshine and palm leaves and bake well on a small piece of parched but rich earth, surrounded with water. Garnish with Hispaniola, a black patch, a grinning skull and a couple of old bones, and what have you? (Answer next month.)

WHICH WAS WHICH?

Five schoolboys, in writing to their parents about the result of an examination, each agreed to make two statements, only one of which would be true. They wrote as follows:

Dick wrote: "Tom was 2nd, I was 3rd."
Harry wrote: "I was 1st, Bill was 2nd."
Bill wrote: "I was 3rd, Harry was 5th."
Tom wrote: "Tom was 2nd, John was 4th."
John wrote: "John was 4th, Dick was 1st."

Can you discover what were the actual examination placings for each of the five boys?

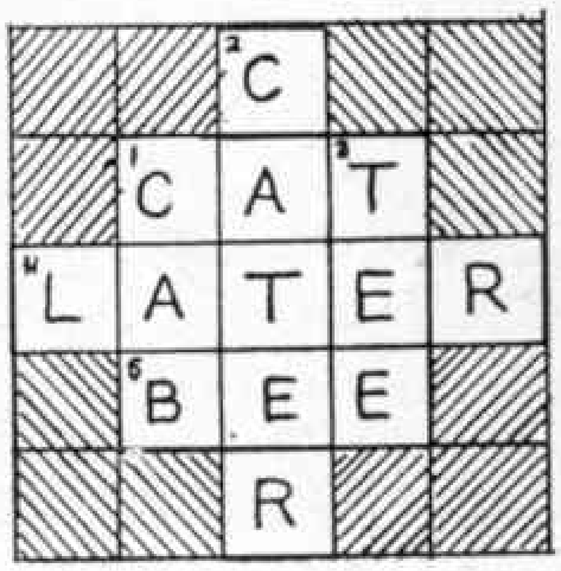
ANSWERS TO LAST MONTH'S PUZZLES

Is This Correct?

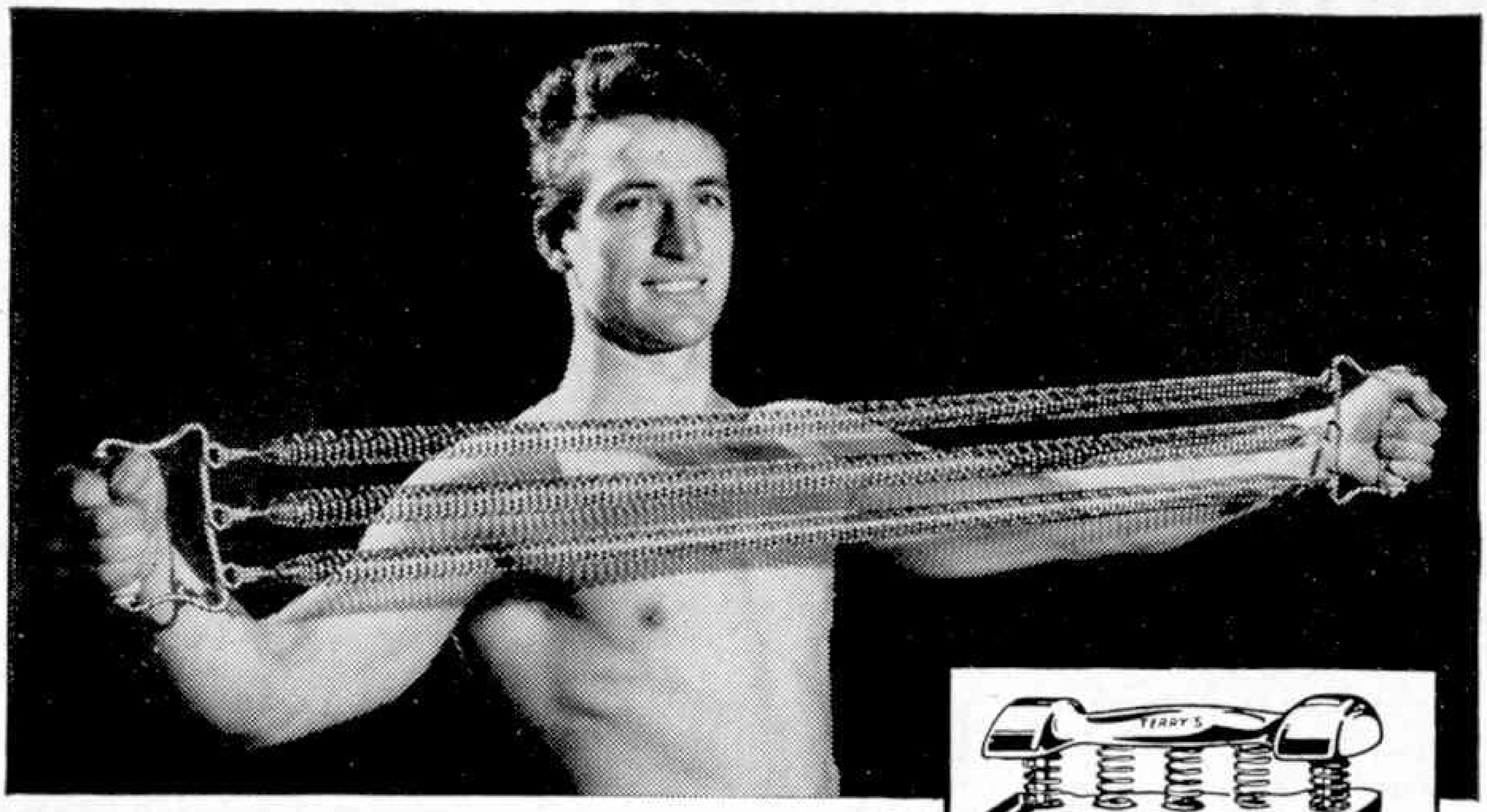
The statement about Moses was incorrect. It should have read: Moses was the adopted son of the daughter of Pharoah.

Three Minute Crossword

The solution to the Crossword is shown alongside.



Do you exercise *every* muscle?



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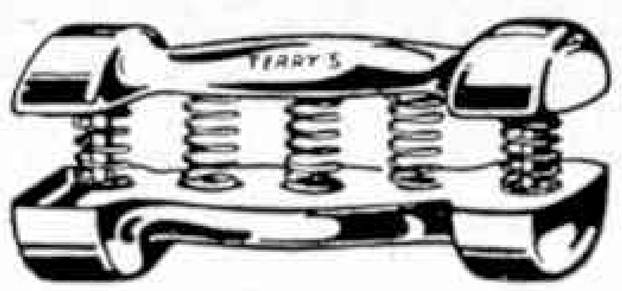

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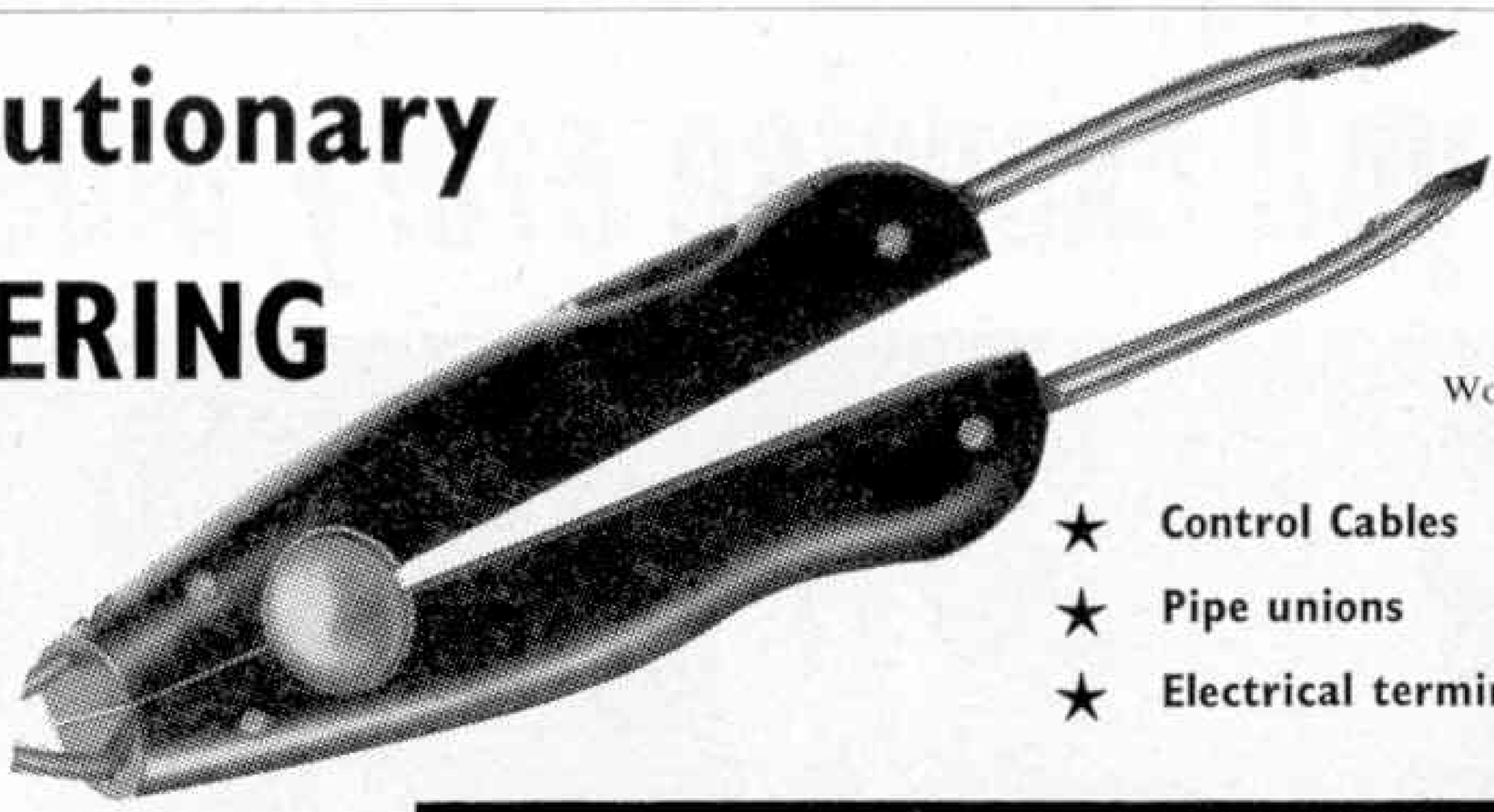

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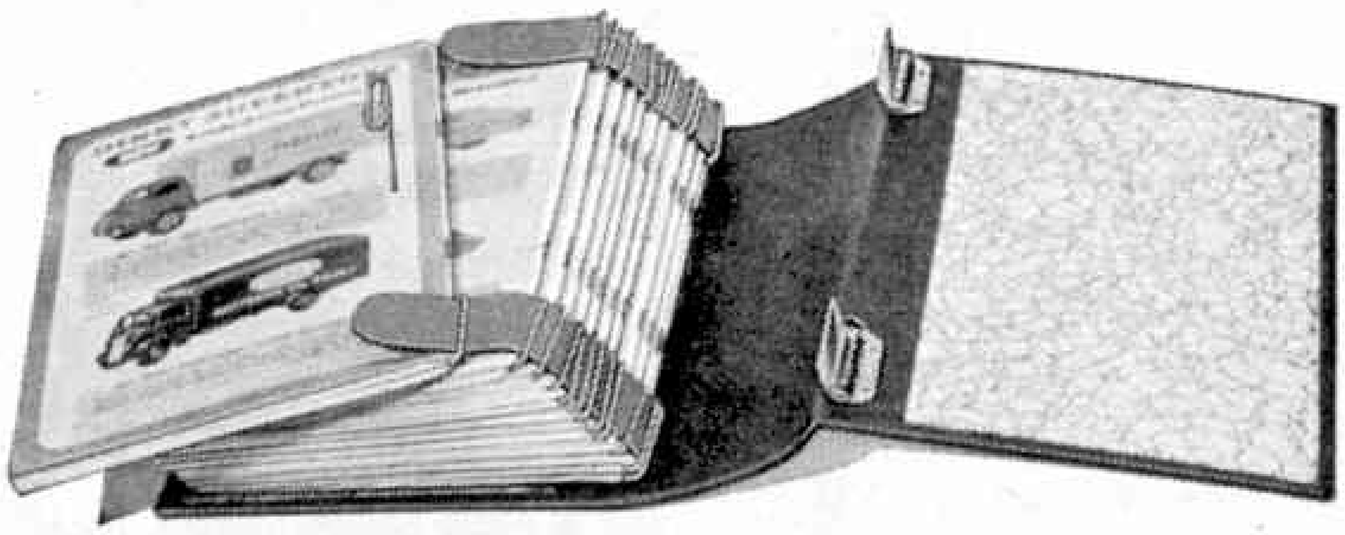

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The successful use of these tyres on bicycles then caught the attention of the owners of the "horseless carriages" of the nineties. With the repeal of the "Red Flag" Act in 1896, which had limited speeds to 4 m.p.h., a new impetus was given to the development of the motorcar. Everything began to go faster, in much greater comfort. The demand for Dunlop tyres grew and grew.

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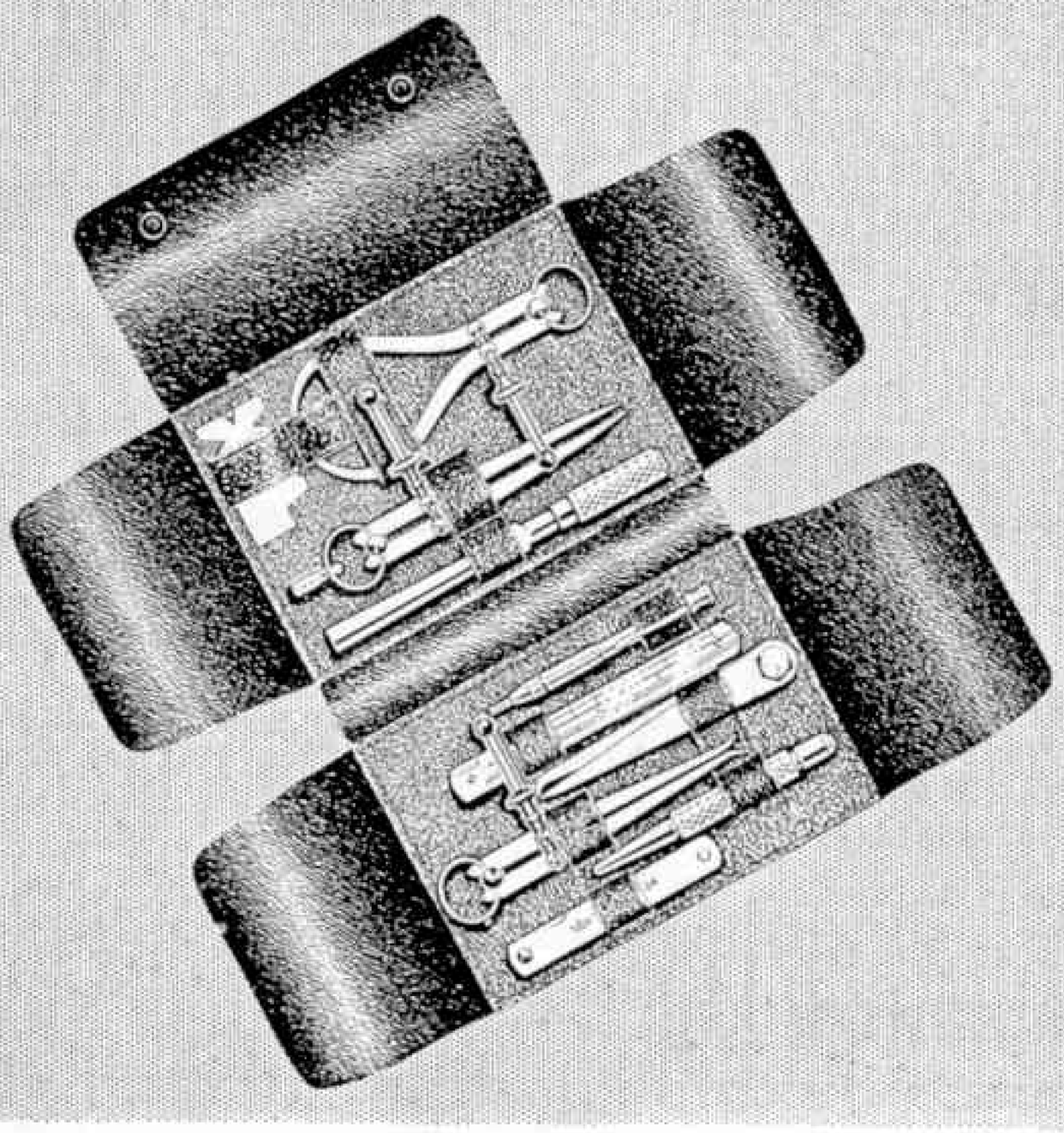

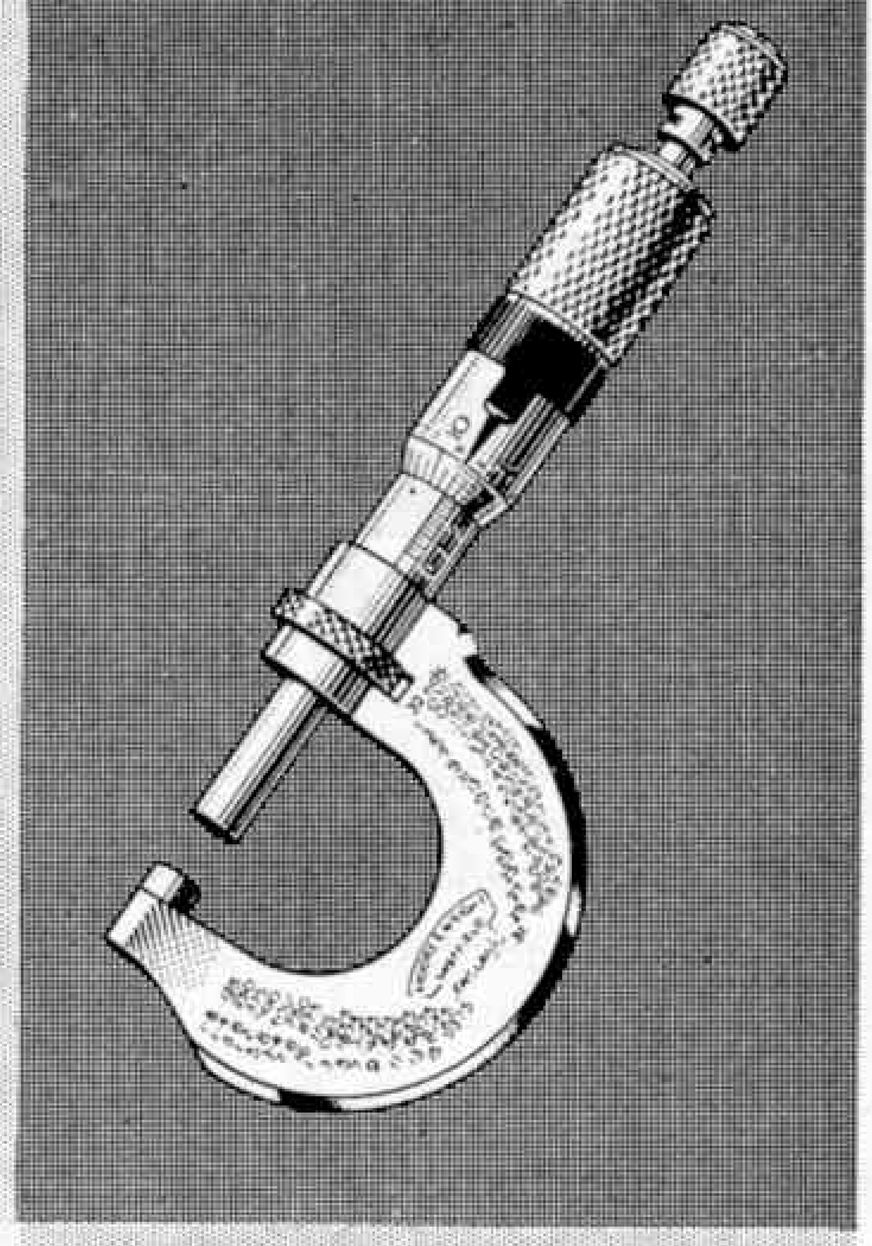

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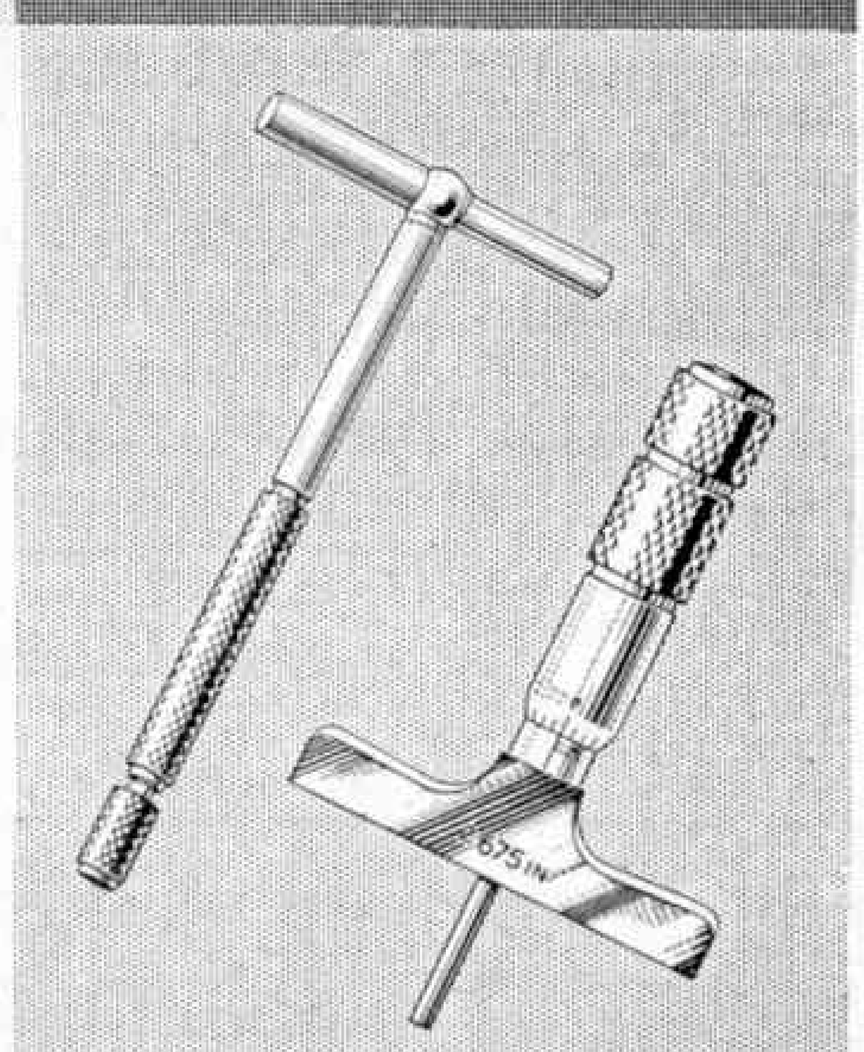

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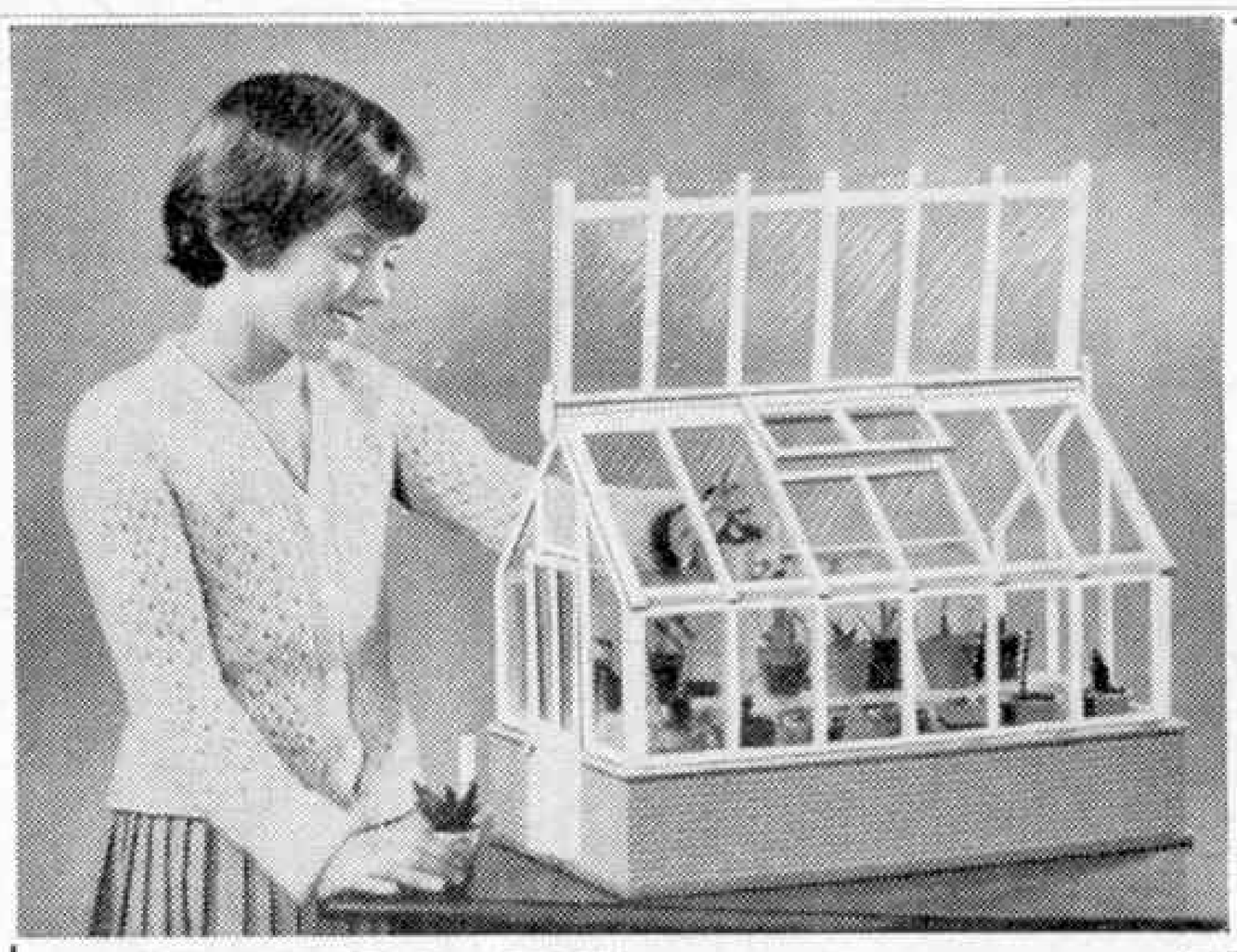

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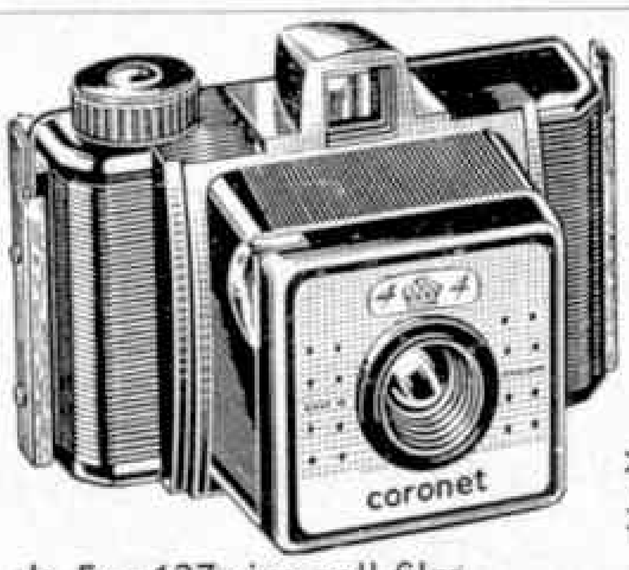

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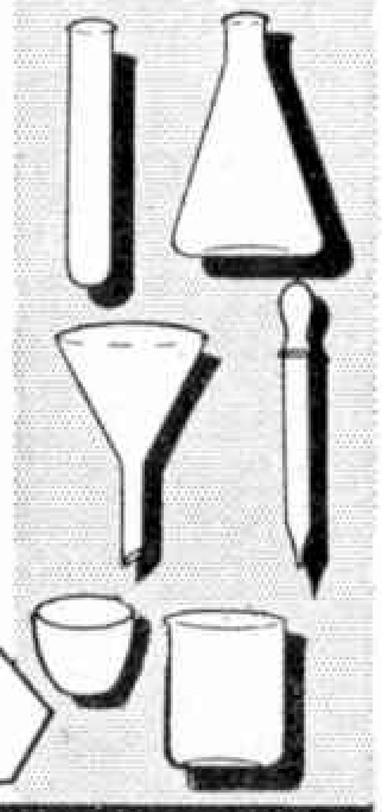

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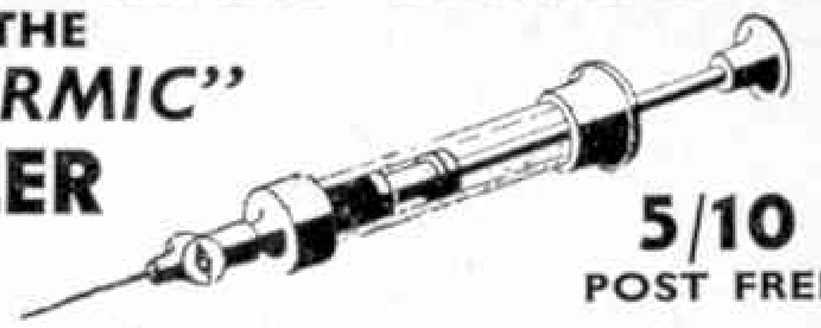

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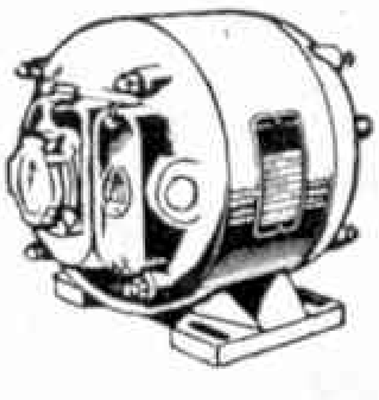

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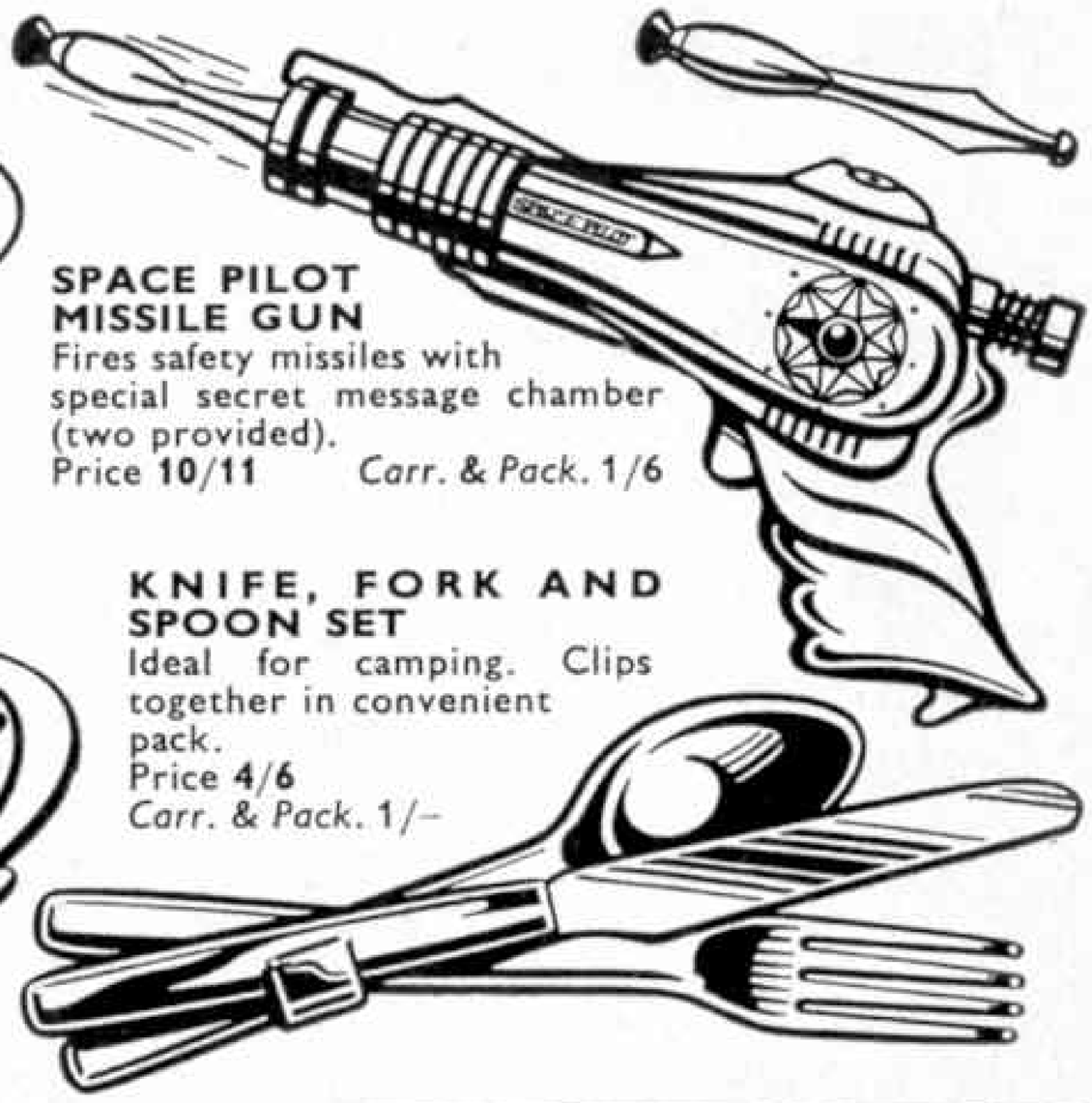

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Pre-war Leaflets Nos. 1, 1a, 4 for sale. Wanted: 167a Geared Roller Race. What offers?—U. Bachelard, Brahmsstrasse 51, Zurich, Switzerland.

Trix Twin Train, Two Trains, Controller. Worth £25. Sell £15. S.A.E.—Fenner, 19 Whitemoss Road, East Kilbride, Glasgow.

"M.M.s" January 1947 to December 1958 inclusive. Good condition. 1947/8/9 bound. 60/– or offers.—Johnson, 4 Deighton Avenue, Withington, Manchester 20.

"M.M.s" August 1939; 1940 February, April–June, September, December; 1941 January–December; 1942 January–March; 1943 May–June, August–December; 1944 January–December; 1945 January–March, May–December; 1946 January–May, July–October, December; 1948 May; 1949 July; 1956 March.—Metcalfe, 30 Whaley Lane, Barnston, Heswall, Cheshire.

Obsolete Hornby Gauge 0 Clockwork includes G.W.R. 4–4–2 "*Caerphilly Castle*" and Tender; 4E Station, 4 Tunnels, Rails, Points, Trucks, Bogie Coaches, Engine Shed, Buffers, Turntable, Many Accessories. First reasonable offer.—Ricketts, 30 Donegall Road, Sutton Coldfield, Wars.

Bayko Set 3, 35/–.—J. Church, 162 Taverham Road, Taverham, Norwich.

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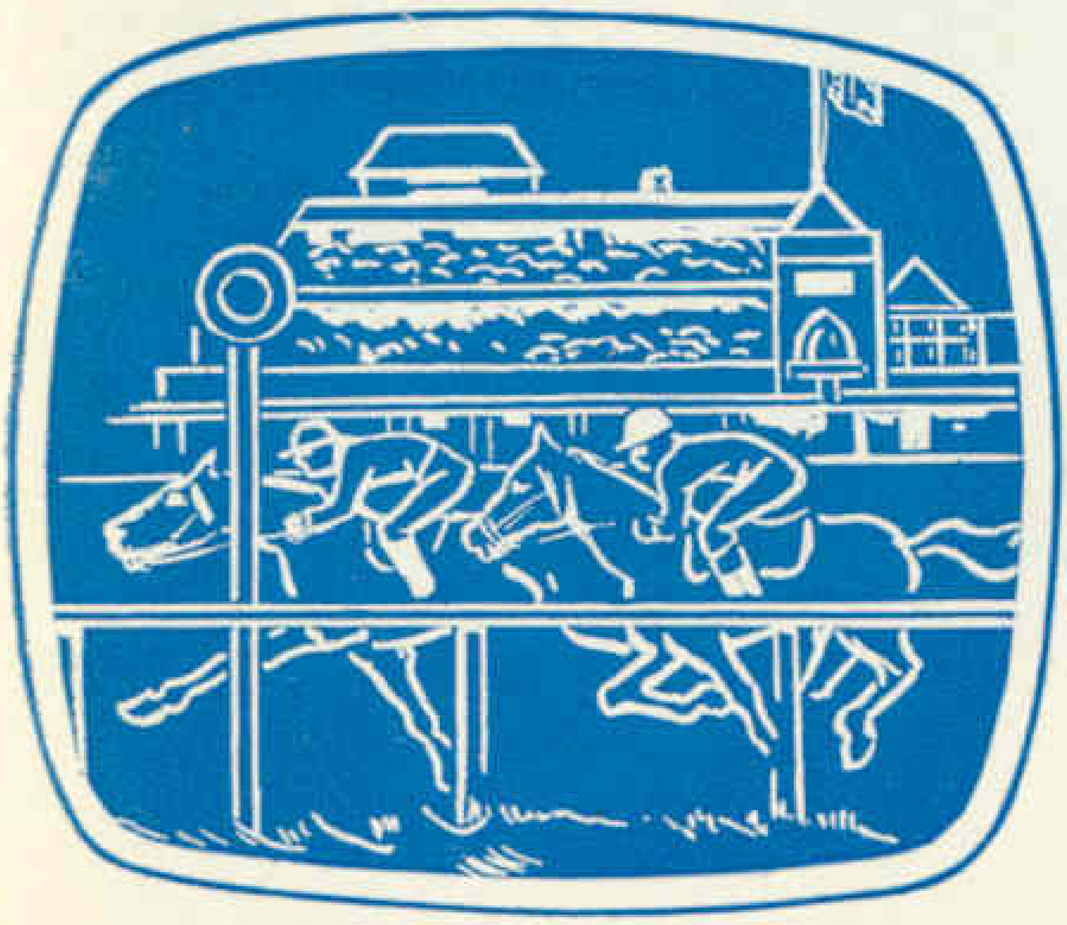

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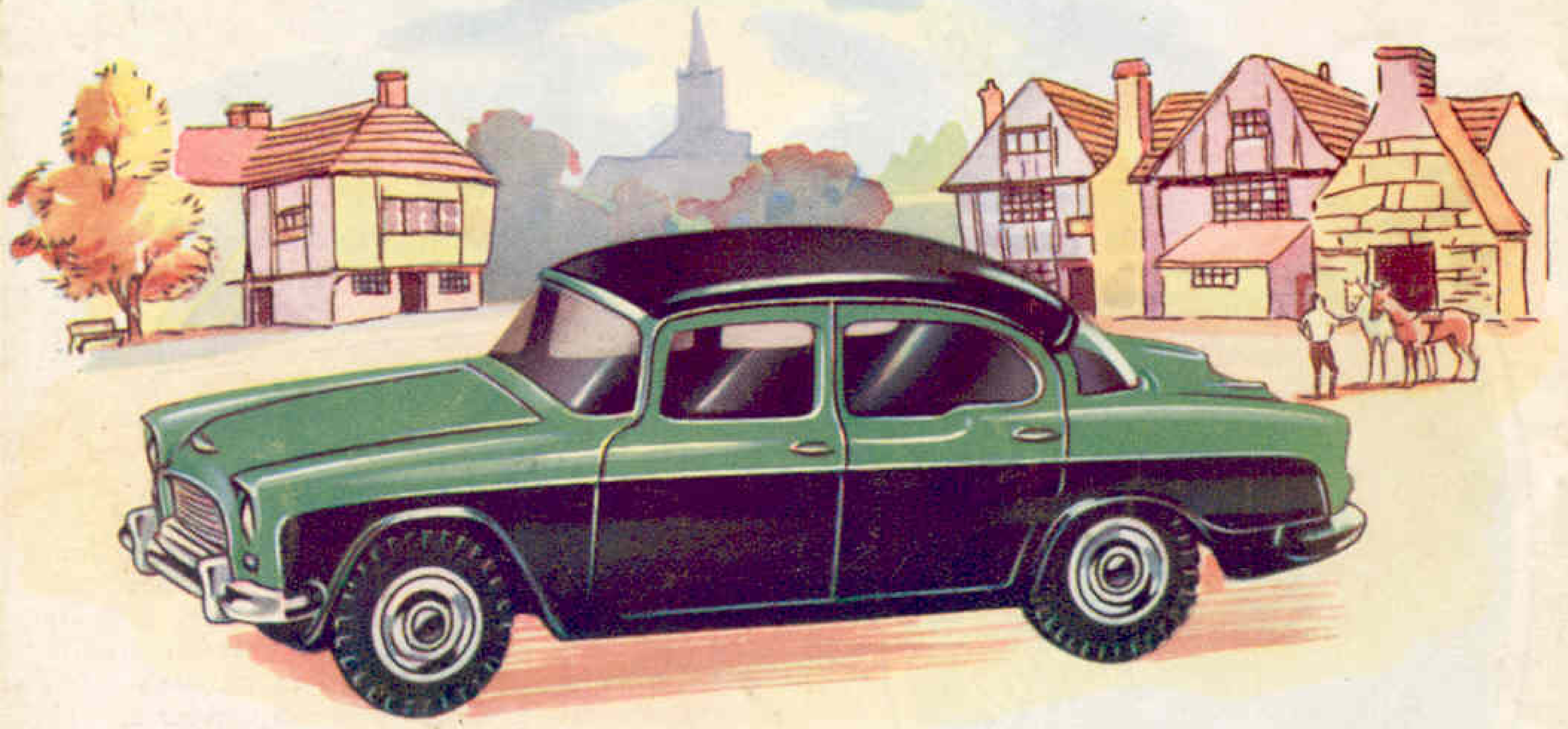

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